U.S. Small Business Administration
Office of Advocacy
Economic Research Division

SBA

Selected Abstracts of Completed Research Studies

U. S. Small Business Administration
Office of Economic Research
Office of Advocacy

SBA

Selected Abstracts of Completed Research Studies

Fiscal Years 1981–82

August 1983

Preface

In its role as small business advocate, the Office of Advocacy of the Small Business Administration has sponsored research of vital concern to small business, as mandated in Public Law 94-305. The law charges the Chief Counsel to determine the needs of the small business community and propose legislative action or administrative policies to address them.

Publication of this second volume of *Selected Abstracts of Completed Research Studies, Fiscal Years 1981–82* continues our objective of making findings under our research program available to the Congress, the research community, other government agencies, and the general public. The first volume, published in October 1981, was for research studies completed in Fiscal Years 1979 and 1980.

The material in this publication reports on research in the following nine topical areas: (**1**) Science, Technology and Innovation, (**2**) Finance, Interest and Credit, (**3**) Employment, (**4**) Wages and Prices, (**5**) Government Regulations, (**6**) Government Procurement, (**7**) Acquisitions and Mergers, (**8**) Taxes, and (**9**) Exporting.

Each research report is available from the National Technical Information Service (NTIS). The NTIS number and price is given at the end of each research study. To receive copies, send your orders and payments to:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Telephone: (703) 557-4650

As Chief Counsel, I am continually looking for ways to be more responsive to the needs of the small business community and to assist it in maintaining a dynamic and progressive role in the American economy. Your ideas and comments are always welcome.

Frank S. Swain
Chief Counsel for Advocacy
U.S. Small Business Administration

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Science, Technology and Innovation

ublic Law 94-305

Sec. 202

The primary functions of the Office of Advocacy shall be to—

(1) examine the role of small business in the American economy and the contribution small business can make in . . .

stimulating innovation and entrepreneurship, and providing an avenue through which new and untested products and services can be brought to the marketplace; . . .

(9) recommend specific measures for creating an environment in which all businesses will have the opportunity to compete effectively and expand to their full potential . . .

The Role of Patents in the Commercialization of New Technology for Small Innovative Companies

Completed in 1982 by
Research & Planning, Inc., Cambridge, Massachusetts

Judith H. Obermayer

Purpose of the Study

The purpose of the study was to identify the problems faced by small business in relying on the patent system and examine the usefulness of the patent system in providing market protection for this sector of the economy.

Background

Over the years the patent system has grown into a complex and expensive way to protect inventions and technology. Initially, inventors applied to the Patent Office for a patent. Now it is general practice before writing a patent application to consult a patent attorney who makes a patent search for prior relevant technology—generally an expensive procedure. Other barriers to using the patent system are public opinion which views the system as a giveaway to business and the attitude of courts that tend to rule against the system.

What does this mean to small business? The small business sector is a major producer of innovations and is in need of funding for development and market introduction of its technology. To attract funding small firms must demonstrate that a protected market niche that assures an adequate return on capital exists for their technology and inventions. With an expensive patent system that provides uncertain protection, small companies have turned to trade secrets as an alternative. This limited protection makes it more difficult to obtain outside funding. The introduction of maintenance fees into the patent system makes its use even less attractive to small companies.

Scope and Methodology

A survey questionnaire used to evaluate the role of the patent system was designed to elicit (1) general background information about the business; (2) the extent to which the company uses patents and the value of alternative methods of protection; (3) the magnitude of patent-related expenses; (4) the effect of Government contract conditions on company strategy and product commercialization; (5) the impact of patent maintenance fees; and (6) opinions of entrepreneurs on proposed patent legislation.

Questionnaires were sent to over 400 members of the American Association of Small Research Companies or to companies that received grants under the National Science Foundation's Small Business Innovation Research Program. Respondents in this group actually conducted over 80 percent of their business with the Government and were heavily oriented toward electronic, computer, and physics technology.

To balance the R&D emphasis of the first mailing, a second mailing was sent to 400 manufacturing companies selected from **Standard and Poor's Register of Corporations and Executives.** Respondents in this group were older firms less dependent on Government with more emphasis on production than on R&D and were mainly in the 25-100 employee size class.

Finally, questionnaires were sent to a small group of large corporations to compare their attitudes and experiences with small companies in the survey. These respondents were oriented toward chemical technology. The number of responses were 105, or 25 percent, for the R&D-oriented firms, 49, or 12 percent, for the manufacturing-oriented companies; and 23, or 50 percent, for the large companies.

Highlights

Extent of Patent Use and Alternative Types of Protection

Although two-thirds of the small companies in the study hold patents, the vast majority hold fewer than 15 patents and use only a small percentage of them. In comparison, large firms use a greater proportion of their patents.

Small electronics and computer-oriented companies depend less on patents for market protection than firms in other industries.

Market potential and amount of investment ranked first and second in order of importance in the decision to promote new technology much more often than other factors. Patent protection ranked third, fourth, or fifth.

Small firms rely more on proprietary know-how and trade secrets than on patents. Only 33 percent of the small firms used patents frequently, while over 80 percent used proprietary technology and trade secrets for protection of their products. The cost fac-

tor was very important in the small firms' decision to seek a patent.

While the use of all types of protection was greater for large companies compared to small, large firms also relied more on proprietary know-how and trade secrets than on patents.

Time and Costs of New Product Development and Marketing

The smaller manufacturing-oriented companies are the fastest to market new or improved products, followed by the smallest R&D-oriented companies. These companies generally improve or modify products and market them in less than 12 months. For new products the time is less than two years. The comparable time was longer for large companies.

The smallest companies have a greater need than larger companies to obtain outside funding for development and marketing of products. Most companies view patents as vitally important in attracting outside funding.

Protection Afforded by Patents and Related Costs

The costs associated with patenting new technology must be weighed against the protection patents provide. The vast majority of companies estimated patent-related expenses as less than 2 percent of overall costs. However, for several companies, including two large companies, the cost was in excess of 10 percent.

Besides the cost, another key problem in the patent system is the inconsistency of court decisions.

Patent Policy Changes

The Government's insensitivity to the needs of small companies has been moderated with passage of P.L. 96-517, which allows small businesses and universities (with some restrictions) to be eligible for patent rights on contract R&D funded by the Government. However, prior to passage of this law, significant numbers of small businesses undertook research before patent rights decisions were made. Large companies would rarely agree to perform any work before ownership of patent rights was perfectly clear.

New legislation calls for maintenance fees to be paid on patent rights at intervals of 3½ years, 7½ years, and 11½ years. When weighing the initial decision of whether or not to apply for a patent, these fees must be included in the total cost.[1]

Over 30 percent of the small companies and over 20 percent of the large companies indicated that these fees would make them less likely to apply for a patent in the future.

Survey respondents were asked for their opinion on other changes in the patent system. An overwhelming majority favored the extension of the patent life in cases where market introduction was delayed due to Government regulations [2] and the establishment of a single Patent Appeals Court. [3] About one-half of the respondents favored an independent Patent and Trademark Office.

Future Directions

The patent system has gradually become less effective at achieving its original goals. There is little public understanding or recognition of the importance of patent protection to the nurturing and development of new technology which fosters economic growth for the good of the country as a whole. A public consensus needs to be reached on the value of the system and the function it should serve. Then resources should be directed toward developing such a system.

Editor's Notes:

[1]The Patent and Trademark Authorization Act (H.R. 6260) was signed by the President on August 27, 1982 (P.L. 97-247), and provides for "tiered" (fifty percent lower) filing and maintenance fees for small businesses, independent inventors and nonprofit institutions.

[2]The Patent Term Restoration Act (H.R. 6444) proposing a longer patent life for products undergoing prolonged approval by a Federal agency failed passage in the House on September 15, 1982, (two-thirds vote required) and was not brought up again for a majority vote.

[3]The Federal Courts Improvement Act of 1982 (P.L. 97-164) merging the Court of Claims and the Court of Customs and Patent Appeals into the new U.S.

Court of Appeals for the Federal Circuit was signed by the President on April 2, 1982. Rules of the Court and the reorganization were effective October 1, 1982.

The complete report is available from NTIS. Accession #PB82 190869; Cost: $10.50; Microfiche cost: $4.50.

The Capital Crunch: Small High-Technology Companies and National Objectives During a Period of Severe Debt and Equity Shortage

Completed in 1983 by
Research & Planning, Inc., Cambridge, Massachusetts

Judith H. Obermayer

Purposes of the Study

The purposes of the study were to determine how well small, technology-based businesses have been able to acquire necessary capital during the last five years and what the consequences were when funding was not obtained.

Background

Between 1969 and 1977 small, technology-based companies were responsible for a large percentage of jobs created and played an important role in innovation. This gives support to the belief that high-technology companies hold the key to economic growth in the future, as older industries weaken due to aggressive world competition.

How small, high-technology businesses have fared during the general decline in economic conditions between 1979 and early 1982 has caused concern among some economists and planners. This research examines this very important sector of the economy with particular emphasis on their ability to obtain capital.

Scope and Methodology

The economic climate from 1979 to 1981, with emphasis on monetary conditions, was examined.

A survey was made of a sample of high technology companies representative of this business sector nationwide to determine what effects the cost and availability of capital has had on them. A questionnaire was mailed to 1,000 randomly selected companies from a sample of 2,000 provided by the SBA from the Indicative Data Base. Only companies located in the 15 states having the largest number of establishments with less than 250 employees and classified in one of the 13 SIC code high-technology industries selected for study were surveyed. Data from the *County Business Patterns, 1979*, were used to select the states. The survey resulted in 101 useable responses.

A survey was made also of venture capitalists and

other capital providers to determine the extent of capital resources available for various uses.

In addition, the means used by 20 large companies in the top Fortune 500 to cope with recent economic conditions were determined by studying their annual reports and by interviewing their financial officers.

Highlights

A noteworthy contribution of the study was the identification of elements fostering development of technology-based businesses. They include:

1. Technological capability. Frequently the presence of a major technological university or industrial or Government research laboratory in an area provides this capability.

2. Positive interaction between a technology-based institution and the technical business community. The attitude of the faculty toward direct involvement in business is a key indicator of this relationship.

3. Successful technical entrepreneurs as role models are needed.

4. Availability of capital. Suppliers of capital are needed who understand and believe in the opportunity provided by new technology and are willing to wait for many years before any real payoff.

5. Assistants. Consultants, training courses related to running a business, and organizations for interchange of experiences and ideas are needed.

6. Skilled labor. The business should be located where there is both a management and technical labor force.

The following consequences of their inability to obtain funding were most frequently listed by the high-technology companies surveyed:

1. Delayed expansion;

2. Reduction in expenditures for capital equipment;

3. Reduction in R&D expenditures;

4. Delayed introduction of new products; and

5. Selling out or disbanding (25 percent reported

this would occur if economic conditions do not improve).

A number of problem areas in capital availability were identified including:

1. Incentives to lend are insufficient to overcome the degree of risk involved. The lending criteria of financial institutions allow them to finance a new plant but not to develop a new product. When the element of risk is introduced, the lender is reluctant to make the loan.

2. A mismatch exists between the criteria used in making loans by the different sources of financing and the characteristics and needs of small, high-technology firms seeking funds. For example, venture capitalists manage such huge amounts they are reluctant to invest less than $500,000 in a business. The small firms surveyed needed much less, and the big paybacks in 5 or 7 years that the venture capitalist is seeking was uncertain.

3. A great disparity exists in the capital available from all sources for small, high-technology business in different parts of the country, due in part to the lack of understanding on the part of lenders of the operational environment of the firm. In a few of the major metropolitan centers some banks have technology specialists who can evaluate the viability of high-technology companies more effectively, but in areas lacking this expertise funds are more difficult to obtain.

Recommendations

A coordinated effort should be undertaken that involves the Federal Government, the banking community, and local and regional organizations throughout the country to support and encourage the development of high-technology companies. Specific recommendations were:

1. Scale SBA loan guarantees to provide higher percentages of guaranteed funds for technology-based businesses than for other businesses.

2. Allow an investment tax credit for the lender for loans to small technology-based businesses.

3. Provide SBA loan guarantees for other capital pools such as pension funds for loans to small business.

4. Reduce interest charges on money lent to SBICs

that provide equity capital to small technology-based enterprises.

5. Modify tax policies to increase retained earnings. Examples are:

   a. Increase the lowest bracket level to above $25,000.

   b. Increase the taxable level to $500,000 before the highest rate applies.

   c. Raise the accumulated earnings tax exemption to above $250,000.

   d. Allow for expensing of R&D equipment.

   e. Exempt the first $25,000 of income from all taxes.

6. Encourage private investment in high-technology companies, particularly at the start-up stage. For example:

   a. Create mechanisms at the state and local level for linking investors and investment opportunities.

   b. Create a hybrid security that could offer a fixed rate of interest and a percentage of profit to investors. This security could include such tax features as capital gains treatment of the investor's profits; deductibility by the small business of profits and interest paid; and investment tax credit to investors.

   c. Allow a 10 percent investment tax credit for funds invested in a Qualified Small Business Investment.

   d. Defer capital gains taxes if funds subject to such tax are reinvested in a Qualified Small Business Investment.

   e. Exclude 80 percent of the gains from the sale of a small business equity investment that has been held for 5 years or more.

   f. Eliminate the limitation on loss deductions for small business stocks.

The complete report is available from NTIS. Accession # PB 83 208223; Cost: $11.50; Microfiche Cost: $4.50.

The Relationship Between Industrial Concentration, Firm Size, and Technological Innovation

Completed in 1982 by
Gellman Research Associates, Inc., Jenkintown, Pennsylvania

Earl E. Bomberger

Purpose of the Study

The purpose of the study was to examine the relationships that exist between innovating firms, the industry to which they belong, and the environment in which they operate, with special emphasis on firm size.

Background

This research was initiated to further the understanding of the process of innovation to give those seeking to stimulate innovative activity facts for policymaking.

One hypothesis is that large firms are better able to innovate because of their larger pool of financial resources. Conversely, those who believe a small firm environment favors innovation would argue that increasing firm size leads to inertia and slows the desire to innovate.

Shifting the argument from firm size to industry concentration, one theory is that highly concentrated industries should be more willing to innovate. The market power of firms in concentrated industries allows them to attain higher profit levels which could result in internal funds to invest in relatively risky R&D. Other arguments to support this view are that companies not subject to short-run uncertainties of competition may be more willing to commit funds to long-run R&D; that firms with greater market power may be more able to use the results of innovation through their extensive distribution and marketing channels; and that firms that do not compete on a price basis may be more interested in product differentiation and innovation.

The opposite argument is that firms in highly competitive industries have a greater incentive to innovate because of the competition. A hypothesis that follows from this view is that firms with high market power will innovate more slowly but may be aggressive followers or imitators of smaller firms who have completed the innovative process.

Methodology

This study examined in detail actual innovations brought to market as opposed to many previous studies which used patented innovations or R&D expenditures as measures of innovative activity.

A sample of innovative products was compiled from technology and engineering publications issued between 1970 and 1979, and was supplemented with data on 45 innovations introduced after 1969, from an earlier study made by the contractor for the National Science Foundation, to give a total sample of 635 innovative products.

The publications covered three relatively concentrated industries: SIC 357—Office, Computing and Accounting Machines; SIC 371—Motor Vehicles and Motor Vehicle Equipment; and SIC 386—Photographic Equipment and Supplies.

The four relatively more competitive industries covered by the publications were SIC 307—Miscellaneous Plastic Products; SIC 354—Metalworking Machinery and Equipment; SIC 355—Special Industry Machinery, except Metalworking Machinery: and SIC 383—Optical Instruments and Lenses.

The sample of innovations that resulted from this selection process represented a broader range of products than the seven areas originally chosen for emphasis, which accounted for 209 of the 635 innovations.

Telephone inquiries and mailed questionnaires were used to obtain detailed data from innovative companies on a subset of the sample. Questions asked included: dates of key preproduction activities; dates of marketing activities including first retail sale; how the technology leading to the innovation was acquired; the role public funds played relative to the innovation; the size of the organization when the innovation was introduced; the organizational form of ownership when the innovation was introduced; and marketing information about the product and buyers. When these data were used to test a hypothesis, the maximum amount of data for the test was used.

Other data sources were used to develop statistical tests on the relationship between innovative behavior and the industry characteristics of concentration, capital intensity, and growth. Con-

centration was measured using the 4-firm concentration ratio by value of shipments for 4-digit SIC codes from the *1972 Census of Manufactures* of the Bureau of the Census.

Capital intensity was measured by computing gross stocks per employee. Data for gross stocks, which are available only for 3-digit industries, were obtained from the capital stock data base of the Bureau of Labor Statistics. Comparable 3-digit SIC industry employment data were used in the calculations.

The annual growth rate for employment was calculated using employment data for 1967-76, or 1972-76 in industries where 1967 employment data were not available.

Highlights

Small firms produce 2.5 times as many innovations as large firms relative to the number of people employed.

Small firms bring their innovations to market faster than large firms.

I [illegible]
a[illegible]
firms than do smaller companies.

Small firms in *diffuse* industries were *less innovative* than other small firms whether or not they were in a *declining* or *growing* industries group.

Small firms in *slightly and moderately concentrated* industries in the *growing industries* group were *substantially above* the group average for all small firms in innovations per employee.

Large firms in the *growing* industries group were *more innovative* than the average large firm in the group if they were in *slightly to moderately concentrated* industries.

The large firm rate of innovation in *highly concentrated* industries was *below* the average innovation rate for all large firms in the *growing* industries group.

Small and large firms exhibit substantially the

same distributions of innovation with respect to concentration ratio.

Innovation performance by small firms is not affected by capital intensity.

Large firms innovate less in capital-intensive industries than in industries that are not capital intensive.

Implications of the Findings

With small firms producing significantly more innovations per employee, bringing these innovations to market faster, and being more efficient in their use of R&D dollars than large firms, public R&D funding of small technologically aware firms will be significantly more cost effective than the funding of larger firms.

The complete report is available from NTIS. Accession #PB82 226119; Cost: $16.50; Microfiche cost: $4.50.

Critical Lifetime Experiences of Entrepreneurs: A Preliminary Analysis

Completed in 1981 by
Venture Assistance, Inc. and Baylor University, Waco, Texas

Calvin A. Kent, et al.

Purposes of the Study

The purposes of the study were to establish a statistically reliable methodology for investigating the characteristics of successful entrepreneurs that distinguishes them from the general business population and to determine which critical events in their lives had any statistically discernible effect upon their decision to become entrepreneurs.

In addition, the research was to include a bibliography of instructional materials that might create entrepreneurial inclinations in elementary and secondary students. This resulted in the report *Materials for Entrepreneurship Education: Resource Bibliography for Primary and Secondary Instructors.*

Background

An increasing awareness that entrepreneurship is vital to the economic development of the Nation has fostered a renewed interest in determining what causes people to become business owners. Past research has looked at psychological characteristics or sociological environments that affect such a decision. This paper seeks to determine if a common pattern of experiences that entrepreneurs have had as children or young adults emerges which significantly influenced their decisions to own or incorporate their own enterprises. Once such experiences have been identified, programs and curricula may be developed that will encourage and nurture entrepreneurship.

Methodology

Questionnaires were sent to a sample of 4,200 successful entrepreneurs selected from the 8,400 Action Council Members of the National Federation of Independent Business (NFIB). A response rate to the questionnaire of 37 percent yielded 1,541 useable replies.

The distinguishing factors and critical lifetime experiences of business owners assessed are given in Table I.

Respondents were classified into four groups as follows:

Managers -those who manage a business which they did not initiate and in which they hold no significant share of ownership;

Acquirers -those who acquired an existing business and are now serving as owner/ managers, but stated they have not expanded the business significantly since acquiring it;

Developers -those who acquired an existing business, expanded it significantly, and continue to own and operate it; and

Initiators—those who initiated their own business and continue to operate it

The data were processed for analysis using the Statistical Program for the Social Sciences (SPSS).

The hypotheses tested were:

(1) Certain critical early lifetime experiences influence the decision to choose entrepreneurship as a career;

(2) Critical lifetime experiences of entrepreneurs are different from those of managers; and

(3) Critical lifetime experiences can be used to predict those individuals who possess a high propensity for entrepreneurship and will choose it as a career.

This study is a first attempt to develop suitable methodologies for verifying these hypotheses.

Conclusions

It was possible to classify 65.7 percent of the respondents as "initiators" or "managers" using the ten variables of sex, age, years in business, participation in seminars, attendance at conventions, scouting, FFA/FHA (Future Farmers of America/Future Homemakers of America), courses in finance, courses in management, and newspaper delivery.

A statistically significant relationship exists between a respondent's association with another individual who owned his own business and the respondent's decision to become an entrepreneur. The statistical relationship increased if the other person was a parent.

If the influencer was a "manager," it was highly unlikely that the respondent chose to be an "initiator" or a "developer."

The longer an entrepreneur works, the more important work experience becomes as the factor behind the decision to start a business of his own. This substantiates the contention that entrepreneurs are likely to discover their innovative product, service or technology while employees. The more expertise an individual acquires in an occupation, the more likely he is to find opportunities for starting his own business.

Post-educational work activities were not a strong contributing factor in determining whether an individual did or did not initiate a business venture.

Entrepreneurs generally tend to be less well educated than managers and tend to attach less importance to education. This supports the hypothesis that the educational system does not tend to prepare individuals for a career in their own business.

Those classified as "developers" or "initiators" were older, and the age differential was significant. This finding is consistent with the hypothesis that entrepreneurs acquire both experience and capital working elsewhere before initiating their own business ventures.

Education in business subjects produced no discernible trend which distinguished entrepreneurs from others. This finding lends support to the belief that collegiate business education is more likely to produce managers than entrepreneurs.

Participation in extracurricular activities was more likely for managers than for entrepreneurs.

A strong correlation existed between participants in technical/trade school and respondents who started or expanded an existing business.

A higher percentage of females were found in the "initiator" category than in the "manager" category. This may reflect bias against women in managerial ranks, causing them to see venture initiation as a more likely way to obtain both status and success.

The complete report is available from NTIS. Accession #PB82 213141; Cost: $13.50; Microfiche cost: $4.50.

Table I

Factors and Critical Lifetime Experiences Used in the Analysis of Entrepreneurial Tendencies

Perceived Factors for Successful Business Initiation:	Aggressiveness Education in Business Adequate Capital Desire to Make Money Manager's Experiences and Attitudes Intelligence
Educational Experiences:	Accounting Economics Finance Marketing Management Statistics National Honor Society Technical-Trade School Speech-Drama Musical Organizations Journalism Class Officer Conventions Seminars
Extracurricular Experiences:	Athletics Scouting Junior Achievement 4-H FFA-FHA Social Organizations Farm Worker Paper Delivery Yard Work Retail Store Clerk Service Employee Errand Person Construction Worker

Finance, Interest, and Credit

Public Law 94-305

Sec. 202.

The primary functions of the Office of Advocacy shall be to—

(5) study the ability of financial markets and institutions to meet small business credit needs and determine the impact of government demands for credit on small business. . .

Phase I. Initial Public Offerings of Common Stock: The Role of Regional Broker-Dealers in the Capital Formation Process

Completed in 1982 under an Interagency Agreement with the Securities and Exchange Commission

(Phase I of a Two-Phased Study)

Purpose of the Study

The purpose of Phase I of the study was to examine the role of regional broker-dealers in assisting corporations to offer their stock to the public for the first time.

Sources of Data

The data were taken from records required by the Securities and Exchange Commission (SEC). Source documents relating to IPO's (initial public offerings for cash involving the registration of common stock with the SEC by corporations not subject to the SEC's disclosure requirements) include:

(1) Registration Statements;

(2) Form SR's—A form IPO issuers are required to file with the SEC within 10 days after the end of the first 3-month period following the effective date of the IPO, reporting sales of the registered securities and the application of the proceeds from such sales; and

(3) Form 10-K's—An annual report form which issuers subject to the disclosure requirements of the Securities Exchange Act of 1934 are required to file with the SEC.

Financial data concerning securities firms were taken from the Financial and Operational Combined Uniform Single (FOCUS) Reports, which each broker-dealer is required to file quarterly showing income statement and balance sheet data.

Scope

A review of published research on problems of small business capital formation is presented as background for placing the data developed for this study in a larger context. The traditional literature examines the efficiency of the securities markets, while the study focuses on the characteristics of the IPO issuers and on managing underwriters.

The report includes summary information regarding the volume of IPO's issued from January 1, 1972

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through June 30, 1979, which were managed by national or regional broker-dealers.

The volume of common stock offerings by publicly-held corporations is compared to the volume of IPO's issued.

The IPO's are stratified by issuer's size, issuer's line of business, type of offering, and characteristics of the managing underwriter. Data concerning managing underwriters document the role of the regional broker-dealers in the capital formation process.

Data on IPO's underwritten on a firm commitment basis or on a best efforts basis are given.

Also, data are given on issuers of IPO's engaged in high technology manufacturing.

A summary profile of the broker-dealers who were managing underwriters of the IPO's is shown. Managing underwriters are those broker-dealers designated as managers in the registration statement. In this study if more than one manager is listed, the first one mentioned is assumed to be the managing underwriter for the entire issue.

The effects of the 1978 change in the ceiling for issues exempt under Regulation A are discussed.

Highlights

Between January 1, 1972 and June 30, 1979 regional broker-dealers:

—managed 78 percent of the initial offerings distributed by managing underwriters;

—raised $2.9 million in broker-dealer managed initial public offerings;

—accounted for 48 percent of the funds raised in broker-dealer managed initial public offerings;

—tended to manage the offerings of smaller issuers;

—managed 91 percent of the initial offerings of corporations with less than $10 million in annual revenues;

—raised 73 percent of the gross proceeds of these smaller issuers;

—managed 124 of the 155 high technology issues; and

—raised 60 percent of the gross proceeds of high technology issuers.

The level of concentration in the initial public offering market has declined since 1972. In 1972 the largest 10 percent of the managing underwriters managed 54 percent of total dollar volume. Since 1977, the percentages have ranged from 34 percent to 37 percent.

The raising of the ceiling for issues exempt under Regulation A to $1,500,000 in 1978 appears to have resulted in more underwritten offerings of these issues, although the evidence is not conclusive.

The complete report is available from NTIS. Accession #PB82 135997; Cost: $9.00; Microfiche cost: $4.50.

'hase II. The Role of Regional Broker-Dealers in he Capital Formation Process: Underwriting, Aarket-Making and Securities Research Activities

ompleted in 1982 under an Interagency Agreement with the Securities and xchange Commission

'hase II of a Two-Phased Study)

urpose of the Study

The purpose of Phase II of the study was to examine the underwriting, market-making and securities research support which national and regional broker-dealers provide issuers of initial public offerings (IPO's).

ackground

The literature review made in Phase I confirmed that there was little information on the role of regional broker-dealers in raising capital for small businesses. One previous effort to examine this role was attempted by the National Association of Securities Dealers, Inc. (NASD) and documented in the *Report of the Joint Industry/Government Committee on Small Business Financing.*

NASD found that a reduction in the number of broker-dealers and increased industry concentration were major obstacles to small business financing. The study observed that regionally- and locally-oriented broker-dealers are needed to underwrite the issues of small businesses if they are to gain access to the capital markets.

efinition

In Phase I, the first listed managing underwriter was assumed to be the managing underwriter for the entire issue. In Phase II, each member of the underwriting syndicate is considered a managing underwriter for his share of the offering.

ources of Data

Registration statements, Form SR's and Form 10-K's filed by offerors of IPO's with the Securities and Exchange Commission (SEC) were the source documents for data relating to IPO's. The Financial and Operational Combined Uniform Single (FOCUS) Report provided data concerning securities firms.

The Broker-Dealer Survey and the Issuer Survey conducted especially for this project also provided important information.

cope

Phase II of this study extends the base data developed for Phase I from June 30, 1979 through Decem-

ber 31, 1980. More important, however, Phase I sets forth new data relating to the market-making securities research contribution of regional brok dealers to the securities market relating to IPO's

Highlights

Trends in IPO Offerings

After 1972, a substantial decline in the volume IPO's issued occurred, which was more severe a of a longer duration than the drop in the commo stock offerings of publicly-held corporations.

Then, in 1980, a dramatic recovery took place in volume of IPO's issued with the increase nearly triple the 1979 total. Natural Resource and High Te nology offerings were nearly five times the 1979 totals. For Other Manufacturers the volume was times the 1979 total.

In real terms, however, the capital raised through IP each year since 1972 was less than the 1972 total

Management of IPO Offerings

During the nine years from January 1, 1972 througl December 31, 1980, regional broker-dealers serve as lead managing underwriters for 79 percent of the IPO's issued, and raised $2.8 billion, or 56 p cent of the $5 billion total raised through IPO's.

Regional broker-dealers dominate national broke dealers in terms of number of issues managed, bu a large difference exists between the size of issue managed by each.

Over the 1972-80 period, regional broker-dealers ma aged 92 percent of the offerings of issuers with less than $10 million in annual revenue. In 1980 regio broker-dealers managed 85 percent of IPO transactions, but only one-third of the dollar volume.

Securities Research Coverage

Almost all of the research of stocks is geared towa large firms that offer greater potential commission revenue. Over one-half of the investment research the broker-dealers studied was provided by fifteen firms, of which 9 were national broker-dealers.

Sixty-three percent of the research coverage provided by the firms in this study was provided by regional brokerage firms.

Lack of information on small firms may be one factor causing their stocks to be discounted, resulting in higher returns to investors and higher costs to firm owners.

The foremost reason regional broker-dealers begin research coverage of a stock is that the issue has a regional or local investment following.

Sixty-nine percent of the research coverage of high technology firms is provided by regional broker-dealers.

The size of the firm and its line of business appear to be the important determinants of securities research coverage.

The complete report is available from NTIS. Accession #PB82 136003; Cost: $10.50; Microfiche cost: $4.50.

Venture Capital Investment in National Need Areas

Completed in 1982 by
Venture Economics, Inc., Wellesley Hills, Massachusetts

Stanley E. Pratt

Purposes of the Study

The purposes of the study were to define quantitatively the characteristics and trends of venture capital investing during 1978–80 and to examine venture capital investment in "national need areas" as defined in the study.

Background

The fundamental objective of the venture capital industry is to identify and invest in business opportunities with the potential for high growth. Many of these opportunities are in industrial sectors that are identified with national needs, since the basic structural changes that cause a particular national need also create potentially profitable business opportunities. The organized venture capital industry appears to respond quickly and dramatically to changing investment conditions. This response can have a positive or negative impact on national need areas. This study documents venture capital investment activity in national need areas for the 10-year period of 1970–80.

Definitions

Venture capital is financing provided for (1) early stage ventures, (2) expansion of growth companies that do not have access to institutional funding, and (3) management leveraged buyouts that revitalize existing businesses.

The venture capital industry is comprised of three main groups: (1) independent, private venture capital firms; (2) Small Business Investment Companies (SBICs); and (3) corporate venture groups.

Independent private venture capital firms are firms organized as limited partnerships or closely-held corporations and funded by insurance companies, endowment funds, pension funds, bank trust departments, corporations, wealthy individuals, and foreign investors.

SBICs are public and private firms licensed as SBICs by the Small Business Administration. Usually they have a minimum private equity capital of $500,000 and access to Government loans to achieve 3:1 or 4:1 leveraging of their private capital.

Corporate venture groups are venture capital subsidiaries of financial corporations such as the Bank of America and Allstate, or divisions of large industrial corporations, such as Xerox, Exxon, and General Electric.

A national need relates to a product, service or function that is generally considered to promote an integral, yet deficient, aspect of the Nation's social, economic and political infrastructure.

The national need areas for this study were defined as:

(1) Energy production, conservation
(2) Medical/health care
(3) Environmental protection
(4) Food production/human nutrition
(5) National defense
(6) Education
(7) Productivity improvement

Methodology

The contractor used proprietary information of its parent company, Capital Publishing Corporation, the publisher of the **Venture Capital Journal.**

Other sources of information include reports from private venture capital investment firms and interviews with these firms, SBA reports, interviews with venture capital subsidiaries of corporations, and correspondence with venture capital groups.

A data base containing venture capital investment over the past 10 years was developed. The data set includes individual rounds of venture capital financing for the companies listed. Partial information is available for 1,431 companies that received financing during 1970–80 from the 100–125 venture capital groups within the venture capital industry, and for 1,944 individual financing rounds transacted during this period. The data set also identifies applications and services of companies by national need areas. It is estimated that the data base contains 56 percent of the financing of the venture capital industry during the 1970's.

Highlights

Overview of Venture Capital Activity

The amount of venture capital investment was approximately $4.5 billion in 1981 with private venture capital firms supplying $1.8 billion, SBICs $1.4 billion, and corporate subsidiaries $1.3 billion.

The number of venture capital firms in 1981 ranged from 430 to 550. Private venture capital firms accounted for 100–150, SBICs 300–350, and corporate subsidiaries 30–50.

Disbursements to portfolio companies by venture capital firms expand and contract according to changes in the amount of private capital committed to venture capital firms. The data show that venture capital and disbursements declined dramatically throughout the mid-1970's, then rose sharply in the late 1970's.

Changes in the amount of disbursements and the number of financings move in the same direction but not at the same rate. The decline in the number of financings per year was greater than the decline in the amount of disbursements in the 1974–78 period. When the amount of disbursements increased in 1978–80, the number of financings per year increased, but less dramatically. These results indicate the rising cost of financing new business development.

Venture Capital Investment in National Need Areas

During the 10-year period studied, a high proportion of venture capital investment was made in national need areas—at least 47 percent.

The relative proportions of venture capital invested in national need areas shift over time. Investment activity in energy and medical/health care technologies more than doubled in the late 1970s while education-related investments declined.

About 30 percent of venture capital investments were made in companies that manufacture and/or market technologies that directly enhance productivity.

Between 1978 and 1980, the overall level of venture capital investment increased substantially, with the majority of the increase going into national need areas.

Venture Capital Investment by Geographic Region

Venture capital investment contributes to the economic development of a region by creating new employment and new tax revenue, although this report does not attempt to quantify the jobs created.

Large differentials exist between a region's share of the U.S. total venture capital investment and its share of the Nation's population. New England accounts for 30 percent of venture capital investment activity, but only 6 percent of the U.S. population.

The 10 states in New England and the Far West accounted for almost 50 percent of the Nation's total venture capital investment, but accounted for only about 18 percent of the Nation's population.

The Mid-Atlantic, South, and Midwest regions combined contain about 47 percent of the U.S. population but received less than 22 percent of the number of venture capital financings during the 1970–80 decade.

Patterns of investment activity in productivity improvement, medical/health and energy correspond very closely between the New England and the California/Southwest Regions.

SBIC and Non-SBIC Venture Capital Investment

Private venture capital firms account for a larger proportion of the total venture capital pool ($1.8 billion versus $1.4 billion for SBICs), while SBICs are more numerous than the private firms (300–350 SBICs versus 100–150 private venture capital firms). Both groups employ similar strategies and have similar objectives.

The core of the venture capital industry is comprised of approximately 100–125 venture capital firms, mostly private, although it includes a group of larger SBICs that are of a size similar to moderate to large private venture capital firms. A comparison is made between the two groups with the investments of SBIC subsidiaries of independent private venture capital firms designated as investments of private venture capital firms.

An analysis of the data shows:

The average financing transaction of SBICs was significantly smaller (about 18 percent) than the average for non-SBICs.

The average financing transaction participated in by Minority Enterprise Small Business Investment Companies (MESBICs) was about 43 percent of the average for SBICs. The number of organized venture

capital industry financings made by SBICs was estimated to be 35 percent, while non-SBICs accounted for an estimated 56 percent of the total. The remainder was funded by other venture capitalists.

The complete report is available from NTIS. Accession #PB83 117879; Cost: $14.50; Microfiche cost: $4.50.

Capital Markets Serving Small Business: Implications of the Rapid Evolution of the Financial Services Industry

Completed in 1982 by
Hudson Institute, Croton-on-Hudson, New York

Irving Levenson

Purposes of the Study

The purposes of the study were to (1) examine the major changes taking place in capital markets and in the financial services industry and (2) determine their significance to small business financing.

Background

The Federal Reserve's shift in October 1979 to intensive policies to control the rate of growth in the money supply to combat inflation resulted in high interest rates. In addition, deregulation of the financial institutions caused an upheaval in the financial services industry. These changes raised a number of issues regarding how small business would fare in competing for funds and financial services and regarding what the implications would be for public policy to strengthen small business financing.

Scope and Methodology

The study is divided into five major sections.

Section 1, "Small Business in a New Environment," uses existing published data, primarily from Government sources, to show trends in economic conditions, changes in the number of self-employed, and sources of small business financing.

Section 2, "Small Business and Changing Financial Services," draws from a previous study made by the contractors, entitled ***The Future of the Financial Services Industry,*** to show the changing financial services environment and its impact on small business.

Section 3, "New Directions in Financing," addresses the issue of long-term capital for small business.

Section 4, "Small Business Finance under Inflation and Tight Credit," uses financial indicators to show the cost and availability of credit at different periods of time.

Section 5 contains conclusions and recommendations.

Conclusions and Recommendations

Financial Services

Changes in the nature of the financial services industry will impact positively and negatively on small business, but there is no reason to believe that the overall impact will be detrimental to this group.

Deregulation of the financial institutions will increase competition and lead to opportunities for improvement in the cost and availability of services for small business. While some firms may cease to serve small business, others may specialize in meeting their needs.

The estimated two trillion dollars net worth of small business will provide a major attraction for collateralized loans against tangible assets in the future. Indicators pointing to improvement in the long-run outlook for small business financing are:

—Organizations are adapting to provide services to small business. Many large banks and other financial institutions have set up special units to serve small business. The highly visible success of small technology companies has contributed to this development.

—The establishment of financial service centers by a number of organizations is a trend which is expected to grow. Sears plans to open several centers combining the services of All State Insurance, Dean Witter, and Caldwell Banker.

—Equity financing and initial public offerings in particular have seen spectacular growth in the last two years.

—The number of venture capital firms has grown as the process of providing venture capital becomes institutionalized.

—Publicly-held venture capital partnerships, loans with equity participation, and research and development partnerships are gaining in importance in small business financing.

Economic Climate

More serious efforts must be made to reduce Federal borrowing and to encourage savings. It is essential that swings in monetary policy be avoided. Continuing efforts are needed to reduce marginal tax rates and eliminate inflation taxes.

Public Policy

Public policy should continue to foster the innova tion and deregulation in financial services that is nov occurring, since these improvements may help small business. This includes supporting the Federal Home Loan Bank Board's efforts to give thrift institutions the broader powers of commercial lending factoring, and lease financing.

The possible roles of consumer finance companies and insurance companies in providing capital to small businesses should be examined, and a contin ing search should be made for opportunities to expand asset-based financing.

The SBA should consider using its loan funds to:

—fund countercyclically to economic conditions to provide more money in times of greatest need;

—participate in equity funding; and

—foster asset-based financing to small businesses with significant tangible assets and net worth.

The Administration proposed an exemption of profits in the amount of $50,000 from the minimum tax. Should this tax proposal be adopted, the amount should be increased to $500,000 to eliminate year-to-year swings in tax liability caused by higher variable profit levels of small business.

ie complete report is available from NTIS. Accession 'B83 109983; Cost: $13.00; crofiche cost: $4.50.

Employment

Public Law 94-305

Sec. 202.

The primary functions of the Office of Advocacy shall be to—

1) examine the role of small business in the American economy and the contribution which small business can make in . . .

expanding employment opportunities . . .

Human Capital Transfers from Small to Large Businesses

Completed in 1982 by
Capitol Research, Inc., Washington, D. C.

Bradley R. Schiller

Purposes of the Study

The purposes of the study were to determine the extent to which small firms provide early work experience and training to labor force entrants and the extent to which the firms bearing these costs benefit from this human capital investment.

Background

Regardless of their size or complexity, business firms need a steady flow of new employees to fuel business growth (net job creation) or to replace workers who leave (labor turnover). Productivity, growth and profits all depend on maintaining that flow of new employees at reasonable costs.

The average firm loses 15 percent to 20 percent of its work force each year, but the total work force grows by only 2 percent to 3 percent a year. Firms spend a lot more time and money replacing lost workers than filling newly created jobs. More workers who leave one firm voluntarily and go to another end up with higher pay. To the extent that higher pay reflects greater productivity, the economy is also a winner. But what about individual firms? The employer who hires young, new workers incurs a substantial risk. He is gambling that the newly hired worker will stay long enough for the firm to recoup initial training costs. If an employer can retain initial workers beyond the point where the workers' productivity increases are in excess of wage costs, the firm will ultimately recover its training costs.

This study examines who is providing initial job opportunities, work experience, and on-the-job training, how much it costs, and to what extent the provider firm recovers its costs on its training investment.

Definitions

Initial attachment—the first job held continuously for a period of at least four calendar quarters and paying at least $1,000 in 1982 dollars.

Small businesses—those businesses having under 100 employees.

Medium-sized businesses—those businesses having 100–999 employees.

Large businesses—those businesses having 1,000 or more employees.

Scope and Methodology

The Social Security Administration's Longitudinal Employee-Employer Data file was used to obtain information on a random sample of 29,569 male workers under 22 years of age beginning their employment careers. The study tracks individual workers to assess their training, wage growth, and job mobility over the 1957–69 period. The observation period spans 12 years but an individual worker's employment career may begin at any time within that period. Nearly one-half of the sample started their first 4-quarter job prior to 1960; the rest began in 1960 or later. The average age at initial attachment was 19.2 years.

Highlights

A disproportionately large share of all initial work experience and training opportunities is provided by small businesses. Small business accounts for 58 percent of the work force but provides two-thirds of the first steady jobs held by male workers.

New work force entrants are not a good source of long-term employees. The smallest firms retain initial workers for only 1.9 years on the average. By contrast, the largest firms keep initial workers 2.4 years.

The largest firms are more than twice as successful in converting initial attachments into quasi-permanent employment, which gives them an advantage in recouping the entire costs of early work experience and training. Small business retained 0.9 percent of new entrants over a 9-year span. By contrast, large business retained 2.2 percent.

There is a general movement of trained workers leaving small firms and going to large firms. Small businesses lost over 300,000 (net) newly trained workers to larger firms in a period of nine years. This loss represents one-fifth of all workers initially trained by small businesses during this period.

Small firms in the wholesale and retail trade industry and in the business and personal services industry provide the greatest share of initial attachment opportunities.

Substantial wage increases provide a strong impetus for workers to leave small firms for jobs with large firms. First-year pay increases averaged 23 percent for these workers, reflecting, in part, the skill development provided by the initial small employer.

Policy Implications

Among the issues raised by the study is, "Are public subsidies to private training efforts being allocated fairly to small businesses?"

There is widespread belief that large firms have received most of the public-sector outlays and tax expenditures intended for manpower development. This is clearly inconsistent with the role small business has played in training new entrants to the work force.

New mechanisms for compensating small businesses should be developed. Perhaps the minimum wage should be adjusted for specified classes of workers. Also, replacing manpower-related tax subsidies with general tax reductions to small firms would eliminate keeping up with subsidy policies and would ease the paperwork burden.

The complete report is available from NTIS. Accession #PB83 146779; Cost: $11.50; Microfiche cost: $4.50.

Estimates of the Small Business Share of Employee Compensation by Industry and by Selected States

Completed in 1982 by
Joel Popkin and Company, Washington, D.C.

Joel Popkin

Purpose of the Study

The purpose of the study was to determine the small business share of employee compensation by major industry divisions for 1963 and 1972 for the 11 largest states as measured by economic activity.

Scope and Methodology

Small business is defined as companies with fewer than 500 employees.

The study includes data for the following states: California, Florida, Illinois, Indiana, Massachusetts, Michigan, New Jersey, New York, Ohio, Pennsylvania and Texas. These states accounted for 59 percent of the total United States labor and proprietors' income in 1978.

The industries studied were mining; contract construction; manufacturing; transportation, communications, electric, gas and sanitary services; wholesale trade; retail trade; and services. Lack of data prevented development of estimates for the finance, insurance and real estate sector.

Estimates of total labor and proprietor's income from the Bureau of Economic Analysis (BEA) were adjusted to derive total compensation of employees by state and industry. The IRS distribution of proprietors' and partnership income by state and industry published in the *Statistics of Income, Business Tax Returns* was used to distribute the BEA proprietors' income. This amount was then subtracted from total labor and proprietors' income. The employer contribution to social insurance was added to these figures to arrive at the appropriate employee compensation concept. This was done for each industry by multiplying the total industry labor income data by the ratio of total industry employer social insurance contributions to total industry employee compensation minus total industry employer contributions. Data for this ratio were obtained from BEA. The assumption was made that there was no variation in this ratio by state within major industries. These data were subsequently

allocated to small and large business by using a second data set.

The second data set is comprised of ratios derived from estimates of the small and large business components of gross product originating (GPO) in small and large business and estimates of the components of GPO, such as employee compensation. (Joel Popkin and Company estimates prepared for SBA under contract #SBA-2624-OA-79). The data were adjusted to allow for the variation by state of the small/large business proportion in each of the seven major industry sectors.

Highlights

The proportions of employee compensation originating in small business for the 11 states appear in Table 1.

The average small business share of employee compensation for the 11 states fell between 1963 and 1972 in every industry except services.

In every state the share of employee compensation was lower in 1972 than in 1963 in all industry sectors except services and mining.

In the service industry Massachusetts was the only state in which the small business share of employee compensation was lower in 1972.

In the mining sector the small business share of employee compensation was lower in all states except Florida, New York and New Jersey.

In the mining and manufacturing sectors, more than one-half of the states in the study had a small business share of employee compensation greater than the average.

In construction, wholesale trade, retail trade, services, and transportation, communications, and public utilities the small business share of employee compensation was rarely more than one percentage point above the average.

While employment increased for large business in the transportation, communications, and public utilities industry sector, the small business share of employee compensation declined, particularly in California, Florida, Michigan and New York.

The complete report is available from NTIS. Accession #PB81 238388; Cost: $5.00; Microfiche cost: $4.50.

TABLE 1

Small Business Share of Employee Compensation (preliminary estimates, subject to revision)

	Mining		Construction		Manufacturing		Transportation, Communications, &Public Util.		Wholesale Trade		Retail Trade		Services	
	1963	1972	1963	1972	1963	1972	1963	1972	1963	1972	1963	1972	1963	1972
California	46	43	84	82	36	36	23	13	91	88	66	59	79	81
Florida	28	33	84	81	44	41	30	19	95	91	65	58	79	80
Illinois	58	50	85	83	23	19	27	19	90	85	65	58	76	77
Indiana	73	70	86	84	8	3	34	27	95	93	68	62	81	83
Massachusetts	76	75	87	84	28	27	30	22	94	92	65	58	76	75
Michigan	47	35	86	84	18	15	31	21	94	91	68	60	79	80
New Jersey	49	54	87	85	30	29	28	22	91	87	68	61	80	81
New York	60	61	84	83	39	37	22	8	94	92	67	62	75	76
Ohio	71	52	87	84	14	11	30	22	93	90	67	60	79	80
Pennsylvania	58	36	86	83	19	15	31	23	94	91	68	61	78	78
Texas	66	61	84	81	35	30	31	25	95	90	68	62	81	82
11 State Average	60	51	85	83	26	23	27	18	93	90	66	60	78	79
National Average	56	42	85	83	27	23	30	22	94	91	67	61	78	79
Small Business Share of G.N.P. (Gross Product Originating)														
	45	32	86	84	26	21	25	29	88	85	73	65	84	83

June 14, 1981

Joel Popkin and Company
Economic Consultants

Wages and Prices

Public Law 94-305

Sec. 202.

The primary function of the Office of Advocacy shall be to —

(1) examine the role of small business in the American economy and the contribution which small business can make in improving competition, . . . restraining inflation, spurring production . . .

Effects of Inflation on Small Business

Completed in 1982 by
Battelle Columbus Division and Economics Research Group, Inc.
Columbus, Ohio

Mark Berger, et al.

Purposes of the Study

The purposes of the study were to examine the impact that rising energy, capital and labor costs have had on businesses of varying size and to determine how the level of competition in different industries has been affected as a result.

Background

Unprecedented increases have occurred in the costs of the factors of production over the last decade. Most prominent has been increased energy costs. Between 1972 and 1977 the Energy Price Index rose 220 percent for the total private sector economy and 290 percent for the manufacturing sector. Over the same period, labor costs increased approximately 40 percent and capital costs increased nearly 10 percent.

While all businesses must cope with and adjust to these increased costs, small business bears a disproportionate share of the burden.

Scope and Methodology

Previous studies made by others on this topic have used U.S. time-series data only for total business in the manufacturing sector. This study used time-series state and regional data by firm size for the private economy as a whole and for the manufacturing sector.

Generally, it is believed that the incentive to seek substitutes varies among firms according to the importance of the production costs, and that small firms are less able than large firms to adapt their production process to reduce costs, which, in turn, affects their ability to compete.

The first part of the study examines factor intensity, or the proportion that each factor cost is of total costs, and the ease of substitution for small versus large firms.

The data set for the total private sector consisted of 561 observations covering an eleven-year time period from 1967 to 1977 for all 50 states and the District of Columbia. The data set for the manufacturing sector covers a seven-year time period from

1971 to 1977 for all 50 states and the District of Columbia, taken from the **Census of Manufactures** and from the **Annual Survey of Manufactures.**

In the estimates, total costs were assumed to be equal to the value of output (GNP). State GNP estimates were derived by distributing national GNP in the same proportion that state income was to national income. The factor costs of energy, labor and capital were each computed relative to the state total costs.

Energy consumption was computed by removing government energy consumption from the total, assuming that the ratio of government energy consumption to total energy consumption was equal to the ratio of government labor to total U.S. labor. A weighted average of the prices of major types of energy was applied to consumption figures to obtain energy costs, which were then divided by total costs to obtain energy cost shares.

Using data in the **County Business Patterns,** quarterly labor costs were annualized and divided by total costs (GNP) to obtain labor cost shares.

The share of capital was derived by subtracting the labor and energy shares from one. Thus, the share of capital represents the share of all inputs except labor and energy.

Two firm-size proxy measures were constructed by state and year. The first measure (FS1) is the average number of employees per establishment based on total private sector establishments, computed from **County Business Patterns.** The second measure (FS2) is the average value of output per establishment based on the total value for private sector establishments.

(**Important Note:** The first part of the study relates only to overall trends, since size by industry was not a measure. Of particular importance is that the size data relate to **state** totals. This differs from the Small Business Administration's size concept which is based on **industry** totals. For these reasons care should be exercised in drawing conclusions from this study for the entire small business community.)

The second part of the study examines whether a competitive advantage is derived by those small firms in the retail trade sector that are exempt from minimum wage requirements. Regression analysis was used on **Census of Retail Trade** data to see if the

share of total industry sales and employment accounted for by small business has been changing as a result of small firms being exempt from the provisions of the minimum wage legislation.

The final portion of the study investigates concentration ratios and average establishment size for manufacturing industries to see how firms actually reacted to major price increases between 1972 and 1977.

Highlights

(**CAUTION:** The definitions of "small" and "large" businesses used in this study differ from the Small Business Administration's (SBA's) concept of large and small. Thus the conclusions presented in this report may not hold true for the small business community as defined by the SBA. See the section on "Scope and Methodology" for definitions.)

Effects of Factor Price Changes

Hypothesis: Higher energy prices affect small firms more severely than large firms.

Two findings lend support for this hypothesis:

(1) The production processes used by smaller firms are typically more intensive in energy use. Thus in the short run increases in the cost of energy have had especially severe impacts on smaller firms.

(2) Substitutions of other factors of production for energy may be made in the long run, providing firms have the ability to do so. However, smaller firms in the total private economy are less able to adjust their production processes or substitute factors than are large firms.

In the manufacturing sector, smaller firms showed a greater ease of substitution than larger firms, a result completely opposite from the finding for the total private sector.

Thus in the manufacturing sector, any disproportionate impact of rising energy prices on smaller firms must be offset by the ease with which they can substitute other factors relative to large firms.

Effects of Minimum Wage Exemptions in the Retail Trade Industry

Hypothesis: Exemption from the provisions of the

minimum wage legislation gives small firms a competitive advantage.

This hypothesis was tested by analyzing sales and employment data in the retail trade industry to see if the small business share has been changing as a result of their exemption from paying the minimum wage.

The data could not measure the overall significance of minimum wage exemptions, but there were no clear results which prove that there is a competitive advantage resulting from current exemption.

Actual Structural Change in Manufacturing Industries

Concentration ratios and average establishment size across industries in manufacturing between 1972 and 1977 were examined to determine how firms of varying size reacted to price changes.

The findings were that concentration did not increase over the period in spite of changes in the economic environment. Aggregate offsetting trends were identified where capital-intensive industries increased in concentration while high-skill labor intensive industries decreased in firm size and became less concentrated.

The complete report is available from NTIS. Accession #PB81 216780; Cost: $8.00; Microfiche cost: $4.50.

An Analysis of the Effect of Recessio[n] On Small Business Output

Completed in 1981 by
Joel Popkin and Company, Washington, D.C.

Joel Popkin

Purpose of the Study

The purpose of the study was to evaluate the effect of business cycles, particularly recessions, on small business in the eight major industrial sectors of the economy.

Definitions

For this study small business is defined as firms with 500 or fewer employees.

GPO—gross product originating

CE—compensation of employees

AO—all other gross product originating

Scope and Methodology

Data developed previously by Joel Popkin and Company for the Small Business Administration on gross product originating in small business for the years 1955-76 were used as the basis for the analysis.

The eight industrial sectors for which the GPO and its two major components, CE and AO, were analyzed include:

(1) Mining; (2) Contract Construction; (3) Manufacturing; (4) Transportation, Communications, Electric, Gas and Sanitary Services; (5) Wholesale Trade; (6) Retail Trade; (7) Finance, Insurance and Real Estate (FIRE); and (8) Services.

Two sets of regressions were estimated for each of the three variables, GPO, CE and AO. The results are shown in Table 1.

The first set of regressions measured the fluctuation of a variable within an industry compared to its fluctuation within the total economy.

If the number in the slope column in table 1 for "Total Industry" exceeds 1.0, then the fluctuation of the variable being tested is greater within that industry than its fluctuation within the total private nonfarm business sector.

The second set of regressions measured the fluctu-

ation in the small and large business share of a variable within an industry compared to its fluctuation at the total industry level.

If the number in the slope column for small business in table 1 exceeds 1.0, then the fluctuation for small business within that industry is greater than the fluctuation for the industry as a whole.

The negative numbers in the constant column when expressed as a percent show how much slower the trend growth rate of the variable is than the trend growth rate for the total. For the "Large Business Sector" and "Small Business" the total is for the industry. For "Total Industry" the total is an aggregate of the eight industrial sectors in the study. In addition, a simulated model was used to verify the findings.

[ighlights

The industries ranked from most to least sensitive to cyclical changes in GPO are:

Manufacturing
Wholesale Trade
Contract Construction
Transportation, Communications, Electric, Gas and Sanitary Services
Retail Trade
Services
Mining
Finance, Insurance and Real Estate

The rank order correlation is significant also for all other gross product originating but not for compensation of employees. This suggests that cyclical changes in GPO are largely related to cyclical changes in profits, the most cyclicly sensitive component of all other gross product originating.

Small business is dominant in two of the three industries most sensitive to cyclical changes in GPO, wholesale trade and contract construction. In 1972 the small business share of GPO in contract construction was 84 percent and in wholesale trade 81 percent.

In the economy as a whole, the services sector showed little cyclical sensitivity to changes in GPO. However, the small business services sector, which had an 83 percent share of GPO in 1972, is clearly

more sensitive to cyclical changes in GPO relative to the large business services sector.

The small/large cyclical sensitivity to GPO in the retail trade sector is about the same, even though this sector ranked fourth in the small business share of GPO in 1972.

Small business shows greater cyclical sensitivity for the variable compensation of employees than large business in manufacturing, services, and finance, insurance and real estate.

With respect to all other gross product originating, small business sensitivity is higher in manufacturing and in finance, insurance and real estate.

With small business dominating two of the most cyclicly sensitive industrial sectors—wholesale trade and construction—and more cyclicly sensitive than large business in the service sector, indications are that small business may suffer more than proportionately in recessions and benefit more than proportionately in cyclical expansions.

The complete report is available from NTIS. Accession #PB81 115981; Cost: $5.00; Microfiche cost: $4.50.

TABLE 1. Regression Results—cyclical sensitivity of GPO and its two major components for the eight major industrial sectors and their small and large business subsectors to changes in the larger aggregate components of which each is part.

Industry Sector	Component*	TOTAL INDUSTRY[3]				LARGE BUSINESS SECTOR				SMALL BUSINESS			
		Constant	Slope	Dummies	Rho/R^2	Constant	Slope	Dummies	Rho/R^2	Constant	Slope	Dummies	Rho/R^2
Mining	GPO	None	.670(−1)	.340(74)	NA/.712	None	1.16	None	NA/.807	None	.683	−.252(72)	NA/.811
Mining	CE	−.157	1.26 .984(−1) .861(−2)	None	NA/.614	None	1.20	None	NA/.885	None	.769	None	NA/.797
Mining	AO	None	.307[1]	.490(74)	NA/.820	None	1.13	None	NA/.738	None	.823(−2) .251(74)	−.478(72)	−.33/962
Construction	GPO	None	1.02	None	.39/.625	None	1.04	.114(64)	−.48/.635	None	.82	None	NA/.954
Construction	CE	None	1.05	None	.54/.747	None	1.13	None	NA/.465	None	.977	None	−.33/.962
Construction	AO	None	.965	None	NA/.517	None	1.27	.597(65)	−.48/.463	−.012[2]	1.14	None	−.47/.891
Manufacturing	GPO	−.070	1.86	None	.78/.962	.007	.999	None	−.51/.989	−.020	.990	None	−.47/.899
Manufacturing	CE	−.049	1.54	None	.83/.979	.009	.970	None	−.79/.990	−.022	1.05	None	−.79/.933
Manufacturing	AO	−.116	2.55	None	.52/.903	.007	.986	None	NA/.987	−.029	1.10	None	NA/.819
Retail Trade	GPO	None	.973	None	NA/.577	.026	.957	None	−.52/.784	−.007	.959	None	−.51/.945
Retail Trade	CE	.024	.689	None	NA/.808	None	1.22	None	NA/.699	None	.880	None	NA/.871
Retail Trade	AO	None	1.06	−.085(74)	NA/.624	None	1.27	.123(71)	−.52/.432	None	.878	None	−.50/.864

[1]LN(GPOAO) + IN(GPOAO (−1)

[2]t–ratio = 1.87, all other t–ratios are greater than 1.9

*GPO stands for gross product originating, CE for the employee compensation part of GPO, and AO for all other GPO which consists of profit type income, net interest, capital consumption allowances and indirect business taxes.

[3]Rho is the first order autoregressive coefficient by which the data were adjusted when the Durbin–Watson statistic fell in the critical range.

TABLE 1. Regression Results—cyclical sensitivity of GPO and its two major components for the eight major industrial sectors and their small and large business subsectors to changes in the larger aggregate components of which each is part.

		TOTAL INDUSTRY				LARGE BUSINESS SECTOR				SMALL BUSINESS			
Industry Sector	Component*	Constant	Slope	Dummies	Rho/R²	Constant	Slope	Dummies	Rho/R²	Constant	Slope	Dummies	Rho/R²
Wholesale Trade	GPO	None	1.05	None	.22/.622	None	1.24	−.116(64) .116(72)	NA/.547	None	.955	None	NA/.916
Wholesale Trade	CE	None	.751 .307(−1)	None	NA/.902	None	1.11	.134(65)	−.41/.221	None	.985	None	−.42/.966
Wholesale Trade	AO	None	1.02	.090(74)	.39/.581	None	1.31	None	−.38/.525	None	.921	None	−.47/.864
Services	GPO	.026	.514 .198(−1) .215(−2)	None	−.45/.881	.044	.715	−.032(64) −.048(65)	−.69/.759	None	.973	None	NA/.961
Services	CE	.039	.512 .227(−1) .130(−2)	None	NA/.883	.035	.540	.027 .034 −.088(65)	−.68/.695	None	.989	None	NA/.882
Services	AO	.039	.536	−.051(71)	−.56/636	None	1.33(−2)	.185(72)	NA/.200	None	.964	None	−.38/.920
F.I.R.E.	GPO	.066	.155	.023(71) −.024 (74)	−.75/.591	None	1.01(−2)	.148(64)	.44/.507	None	.844	−.085(64) .084(65) .083(76)	NA/.510
F.I.R.E.	CE	.066	.265	None	.63/.401	None	1.03	−.051(64)	NA/.463	None	1.21(−3)	.185(64) −.202(74)	NA/.376
F.I.R.E.	AO	.062	.178	−.029(73)	.27/.279	None	.991(−2)	.210(64) −.103(65)	.39/.660	None	1.02	−.128(64) .075(65)	.34/.646
Trans., Comm., etc.	GPO	None	.991	None	NA/.773	None	1.02	None	NA/.680	None	.733	.214(76)	NA/.362
Trans., Comm., etc.	CE	None	.857	None	.68/.89	None	1.02	None	NA/.542				.115(−1)
Trans., Comm., etc.	AO	None	1.07	None	NA/.637	None	1.02	None	NA/.887	None	.768	.154(76)	NA/.433

*GPO stands for gross product originating, CE for the employee compensation part of GPO, and AO for all other GPO which consists of profit type income, net interest, capital consumption allowances and indirect business taxes.

Government Regulations

Public Law 94-305

Sec. 202.

The primary functions of the Office of Advocacy shall be to—

(3) measure the direct costs and other effects of government regulation on small businesses; and make legislative and nonlegislative proposals for eliminating excessive or unnecessary regulations of small businesses . . .

Impact of Environmental Regulations on Small Business

Completed in 1982 by
Booz, Allen & Hamilton, Inc., Washington, D.C.

Nathaniel Greenfield

Purpose of the Study

The purpose of the study was to determine if Government environmental regulations have had disproportionately adverse effects on small manufacturing firms.

Introduction

Concern has grown over the disproportionate economic impact of regulation on small businesses over the last decade as Federal regulatory agencies have imposed controls on business. Since Government regulations have the effect of mandating by law the use of a portion of a firm's available capital, they reduce the ability of a firm to invest in activities that would increase its competitive stature in the market.

This study is an attempt to find out whether or not Government environmental regulations have affected small business to a greater extent than large business.

Scope and Methodology

Dun and Bradstreet's Market Identifier (DMI) file on industrial establishments for the years 1970, 1978, and 1980 was the data base from which samples were drawn. The sample industries were classified as heavily regulated or lightly regulated by checking the Federal Register entries on proposed, final, and amended regulations and the SIC codes of the industries affected. A sample of 27 industries subject to extensive EPA regulations and a sample of 20 lightly regulated industries resulted.

The Pollution Control Costs and Expenditures (PACE) reports from the Bureau of the Census provided data on the actual amounts invested in pollution control by industries.

Forecasted expenditures for industries and expected investment by individual plants for pollution control were obtained from economic impact reports from the Environmental Protection Agency (EPA).

Three basic measures were used to compare the actual

relative performance of small firms and large firms within industries:

(1) Concentration ratios were computed for four size categories for the largest firms in the industries. The size groups were comprised of the 4 largest, the 8 largest, the 20 largest and the 50 largest firms in each industry. By dividing the individual size group sales by the total industry sales, the "firm seller concentration ratio" was computed for each size.

(2) Similar ratios were computed for small firms at the lower end of the distribution and were labeled "Lower Tail (LT) ratios." The size breaks used were less than 20, less than 50, and less than 100 employees.

(3) The annual number of dropouts, migrants, and entrants was used to analyze firm turnover.

Background for Analysis

Adverse Effects of Regulation

(1) Regulation causes the firm to have a large initial investment for equipment and future operating and maintenance costs, thereby increasing the average, total and marginal costs of production. Such mandated capital expenditures are believed to increase concentration.

(2) Capital expenditures for pollution control equipment usually add debt to a firm's financial structure, but do not result in increased cash inflows to aid in amortizing a loan, as capital expenditures for production normally do. The additional debt increases the debt/equity ratio and decreases the further borrowing power of the firm.

(3) The increase in competition for capital to comply with regulations raises the cost of financing and results in higher investment and operating costs to the firm.

(4) The increased costs of production processes, shortage of capital and higher borrowing costs many times lead to abandonment of expansion or replacement plans and result in obsolescence of plant facilities. In those cases where investment in new plant capacity does occur, its profitability will be lower.

(5) Investment in research and development will be diminished because of a shortage of funds and a

larger proportion of employees engaged in nonproductive activities.

Measures of Performance

If regulation changes the rate at which new small firms enter or exit an industry, or the rate at which sales increase or decrease, this will be reflected in a change in the concentration ratio.

If regulation affects small firms disproportionately, LT ratios should decline if sales of small firms decrease or if small firms cease to exist. The less than 20 employees ratio is the most sensitive to change.

Turnover analysis measures the dynamics of change in industry structure. Rapid turnover suggests a struggle for market share. The stability of the market and extent of entry barriers may be detected in turnover analysis.

Findings

The primary finding of the study is the detection of a disturbance variable in the market which affects small manufacturing firms in a disproportionate manner.

The market power of small firms and their ability to challenge the leaders in their industries have been significantly reduced as concentration has increased in the last decade for both the highly regulated and lightly regulated industries. The most dramatic increase occurred between 1974 and 1980, the period when most environmental regulations went into effect. The largest increase in the concentration ratio was for the group comprised of the four largest firms in each industry.

The share of industry sales accounted for by small firms declined drastically for both regulated groups, but especially for heavily regulated firms, between 1974 and 1980. The decline was particularly steep, 35.4 percent, for firms having less than 20 employees in the heavily regulated group, indicating that smaller firms are disadvantaged the most.

The annual turnover rate for both highly and lightly regulated industries decreased between 1970-74 and 1974-80, indicating a possible slowdown in competitive activity in the market. On the average there were fewer dropouts, fewer migrants and fewer

entrants, implying that environmental regulations contributed to disturbances in the market.

:omplete report is avail-
from NTIS. Accession
83 152918; Cost: $10.00;
ofiche cost: $4.50.

National Health Insurance and Small Business: A Preliminary Analysis

Completed in 1982 by
University of Massachusetts, Amherst, Massachusetts

Peter Dorman

Purpose of the Study

The purpose of the study was to develop a model to show what effect mandating national employer-financed health insurance would have on small business.

Background

Small businesses are far less likely than large businesses to provide health insurance coverage for their employees. In 1972, 90 percent of the workers employed in firms having 100 or more employees were covered by group health plans, but only 50 percent of the workers employed in firms having 25 or fewer employees were covered.

The benefits to employees of having health insurance coverage are well known. The disadvantages experienced by small businesses that do not offer health insurance plans have also been identified. Among these are: (1) the inability to attract a qualified work force, (2) a higher labor turnover rate, and (3) greater absenteeism and lower productivity levels stemming from inadequate employee health care.

What has not received as much attention in health insurance research are the economic consequences to small business should they be required to offer group health insurance coverage. This study presents a model developed to show the cost burden imposed on small business relative to large business due to employer-financed national health insurance.

Scope and Methodology

The hypothesis tested was that small employers are burdened more than large employers by the costs associated with health insurance plans and as a result are less likely to provide them.

Three factors in support of this hypothesis were investigated:

(1) No economies of scale in the provision of health insurance exist for business. This factor was researched by conducting a telephone survey of five leading providers of group health insurance.

(2) The relative labor-intensiveness of small busi-

ness makes it more difficult to pass on increased costs resulting from health insurance coverage. This factor was discussed in terms of equating the costs of health insurance plans to a tax on employment.

(3) The competitive environment in which small firms operate makes it more difficult to pass on increased costs resulting from health insurance coverage. Economic theory was cited as support for this factor.

A formal model of labor costing and price formation in a two-sector economy comprised of small and large business was developed. In the model, health insurance coverage was treated as a direct cost with unit costs increasing more for small firms because of their relatively higher premium costs.

The model treats premium costs as a direct tax on labor, and by holding the premium cost constant for large and small firms shows that because of their higher labor intensiveness the tax places a disproportionate burden on small firms.

Because small firms must set their prices according to the market to remain competitive, they cannot always pass through entire increases in costs. The difference between the additional costs and the pass-through portion for large and small business is built into the model.

Finally, the model shows how the three factors affecting costs interact with one another. A single ratio is presented which magnifies the combined effect of employment taxes in production costs and output markets.

Highlights

Providers of group health insurance on an employer-by-employer basis continue to discount to large groups by as much as 15 percent to 20 percent.

Some providers of group health insurance pool policies to smaller firms to reduce the premiums, but this practice has not yet won complete acceptance from the largest insurance companies.

The relatively higher health insurance premiums place a disproportionate burden on small firms.

Any mandatory fringe benefit is a tax on employment that varies with unit labor input. Because of their higher labor/output ratio compared to large

firms, mandated health insurance places another disproportionate burden on small firms.

A third disproportionate burden on small firms results from their lack of market power to set prices and remain competitive.

The ultimate result of the combined disproportionate burdens is a substantial squeeze on profit margins for the small business sector.

Much of the political impetus for requiring businesses to offer health insurance results from lack of coverage for millions of small business employees and the self-employed. Yet the limited offering of group health plans in the small business sector is due to cost considerations. Any legislation that ignores this fact would seriously undermine the competitive position of smaller firms.

Employers faced with increased costs for labor due to fringe benefits may opt to lower wages or reduce the amount of wage increases. This solution would result in worsening the economic position of workers through a policy intended to help them.

A suggested alternative to employer-based health insurance is some form of geographically-based health program.

The complete report is available from NTIS. Accession #PB82 149329; Cost: $7.50; Microfiche cost: $4.50.

Small Business and Motor Carrier Regulatory Reform

Completed in 1982 by
Texas A&M University, College Station, Texas

Michael W. Pustay

Purpose of the Study

The purpose of the study was to explore the impact of Government regulations on the interstate motor carrier industry, with particular emphasis on the effect of recent regulatory reforms on the small business community.

(NOTE: This study was made shortly after passage of the 1980 Motor Carrier Act and is not a good measure of what the actual experience has been to date under the new law.)

Background

Small businesses are heavily dependent on motor carrier transportation. In 1978 a study by the U.S. Senate Committee on Commerce, Science, and Transportation showed that 95 percent of the firms surveyed used trucks to transport some of their inputs. Small business must receive adequate trucking services at prices comparable to those paid by large firms to remain competitive.

Threatened with loss of profits during the Great Depression of the 1930s due to competition from motor carriers, the railroad industry successfully lobbied Congress for regulation of the trucking industry. The Motor Carrier Act of 1935 created the Interstate Commerce Commission (ICC) and gave it power to regulate entry into and exit from the market and the prices motor carriers could charge.

Passage of the Motor Carrier Act of 1980 relaxed ICC control over the motor carrier industry and dramatically changed the environment in which motor carriers operate. The regulatory policies existing before and after passage of the 1980 Act and their effect on small business are the focus of this research.

Scope and Methodology

The study establishes the importance of the trucking industry to the small business community, describes the policies of the ICC during the first forty years of its regulation of the motor carrier industry, and examines recent reforms in regulatory policies and their possible impact on small business.

In addition, the study assesses the role of ICC regulation in promoting services to small businessmen residing in small communities and examines the impact of regulation on price discrimination faced by small businesses in shipping their goods. Some of the data used in the study come from prior work performed by the contractor.

Highlights

Regulation of the Motor Carrier Industry Prior to 1980

The Motor Carrier Act of 1935 regulated entry into the motor carrier market by granting operating rights to provide service on a particular route. Motor carriers in operation when the 1935 Act took effect were granted operating rights to continue the service they were rendering. Before new applications were granted operating rights they had to prove existing carriers were unwilling or unable to provide the services in question, which oftentimes was a difficult task.

It has been alleged that the ICC price-setting system caused rates to be higher than they would have been in the absence of regulation. Associations of truckers, known as rate bureaus, submitted tariffs to the ICC for approval. The price-setting actions of the bureaus were immune from antitrust action, providing an opportunity for collusion in price setting free from penalties. The bureaus were extremely powerful in controlling rates since the ICC generally did not challenge the rates set by them.

These ICC policies:

(1) fostered the selling of ICC operating rights by one carrier to another;

(2) allowed excess profits to be made by motor carriers;

(3) caused trucking services to cost more than they would without regulation; and

(4) promoted a less than optimal allocation of traffic among various transportation modes.

Recent Reform of the ICC Motor Carrier Regulation

The Motor Carrier Act of 1980 introduced regulatory reforms which allowed virtually free entry into the trucking markets in a variety of situations and

exempted carriers from ICC regulation in certain instances. Specifically, the Act:

(1) placed the burden of proof in protest cases on the protesting carrier instead of on the new applicant, thereby liberalizing entry into the industry;

(2) increased the role of free market competition in the establishment of motor carrier prices and curtailed the power of rate bureaus to set rates; and

(3) broadened the definitions of commodities that may be shipped and the geographic areas covered in existing operating rights. (For example, a right authorizing the transport of ovens and stoves may now be changed to authorize the transport of fabricated metal products. Geographic rights were broadened to include at least an entire county.)

Impact of Regulatory Reform on Small Business

The study examines the impact of the recent reforms on three areas of concern of the small business community:

(1) continuing motor carrier service to small businesses located in small communities;

(2) protection from discriminatory pricing by regulated motor carriers; and

(3) assurance of having access to all forms of motor carriage equal to that provided to large business.

(1) Motor Carrier Service to Small Communities

Under pre-reform regulation the certificate issued by the ICC to common carriers conferred an obligation for them to provide service to all shippers who requested the service. The ICC did not vigorously enforce this obligation. Carriers could abandon service to small communities without ICC approval, and only if shippers complained did the ICC investigate. With 2,000 ICC employees regulating 16,500 truckers, motor carriers were rarely penalized for noncompliance in the rare instances in which the ICC issued orders for them to reinstate the service.

This situation did not appear to be a problem to numerous small businesses. Three recent surveys showed that small businessmen located in small communities were satisfied with the motor carrier

service they received prior to reform of the regulations. It appears that carriers service small communities because of the profitability of doing so, and the existence or absence of ICC regulation has little effect on their decision.

A random sample of 374 firms in small communities across the country conducted by the ICC six months after the Motor Carrier Act of 1980 took effect, showed that 85.2 percent of the firms found service to be about the same as before the Act, with 13.1 percent seeing some improvement. There is no evidence to suggest that regulatory reform has negatively impacted on small community service.

(2) Protection from Discriminatory Pricing

Reliance of the ICC on rate bureaus as a key element in the price-setting process gave the rate bureaus significant power over prices in general. A sample of tariff filings by various motor carrier rate bureaus was examined to see if small business did suffer price discrimination. The analysis showed that certain patterns found in these tariffs could be construed as favoring larger firms. Among them were:

(1) Pick-up allowances for shippers who deliver their goods to the carriers' loading dock when the allowance is based on the number of items delivered.

(2) Loading allowances for shippers who load their goods onto the carriers' trailers at their own loading docks when the allowance is graduated according to the weight of the shipments, or based on a high minimum weight.

(3) Rules imposed by carriers in the establishment of joint rates. A carrier may refuse to deliver shipments from connecting lines when it could have handled some part of the shipment that another carrier handled, or refuse to participate in traffic that involves more than two carriers.

(4) The power of large shippers to negotiate commodity rates for the shipment of goods. Commodity rates offer significant price advantages to users over class rates and large firms are more likely to have better access to these rates.

Some evidence exists showing that small firms do not suffer from discriminatory pricing when operating in a nonregulated environment. In the State of

Florida, regulatory jurisdiction of intrastate motor carriage terminated on July 1, 1980. Since then, Florida carriers have developed tariffs that appear to be more cost based than those charged before deregulation.

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the sampled carriers, 67 percent con
only one or two shippers. Only 21 pe
than one-half of their allotted eight slots.

ICC policies contributed to this result. ICC discouraged carriers from possessing both common carrier and contract carrier operating rights, and awarded new operating rights of the same type as the existing rights held by the carrier. With common and contract rights interchangeable, the rule of eight was not a binding constraint. With the "rule of eight" causing no discrimination against small business in obtaining services of ICC-regulated motor contract carriers, its elimination under regulatory reform had no adverse effect on the small business community.

Conclusions

Since ICC regulations have had very little positive

effect on the motor carrier services offered to small business in the three problem areas studied, there is little reason to believe administrative and legislative reforms that have occurred in the past five years will have any negative effect on small business. Instead, small business should benefit from elimination of price discrimination practices and from an increase in motor carrier competition.

The complete report is available from NTIS. Accession #PB82 146317; Cost $10.50; Microfiche cost: $4.50.

Impacts of Downtown Revitalization Projects On Small Business

Completed in 1982 by
Cambridge Systematics, Inc., Cambridge, Massachusetts

Glen Weisbrod, et al.

Purpose of the Study

The purpose of the study was to examine the impacts of efforts to revitalize downtown commercial districts, specifically the extent to which different sizes and types of businesses benefit from such programs.

Definitions

Central Business Districts for this study are downtown commercial districts excluding revitalization zones.

Revitalization Zones are those portions of Central Business Districts targeted for revitalization projects.

Redevelopment Projects are those that develop a new center of commercial activity in the downtow area. These projects can be a competitive threat to existing retailers and can be a major source of ne chain store outlets.

In contrast, *Revitalization Projects* are those that use public improvements and support services to strengthen an existing retail district, which is typically dominated by small, independent businesses. This study focuses on the impacts of public efforts to support existing downtown retail districts.

Scope and Methodology

The study presents:

(1) a review of existing trends affecting downtown retailing;

(2) case studies based on site visits and interviews with local officials and merchant representatives in seven cities: Trenton, Madison, Memphis, Baltimore, New Orleans, Portland, and Boston;

(3) changes in business growth and composition in the revitalized areas of these cities; and

(4) a review of public programs and policies affecting small businesses and downtown revitalization.

The Dun's Market Identifier (DMI) file of Dun and

Bradstreet was the data source used to determine changes in business growth and composition. This file is a sample of businesses, not a census. In 1977 the DMI file contained from 3/4 to 2/3 the number of comparable retailers listed in the 1977 Census of Retail Trade for the Central Business Districts of the seven cities studied.

Profiles of each of the seven study areas were constructed to determine the overall composition of retail and selected services establishments over the seven year span. The patterns of change before revitalization were compared with the patterns of change since completion of the revitalization projects.

Highlights

Trends Affecting Downtown Retailing

Business markets follow population movements. The outmigration of the population from the cities to the suburbs led to the development of suburban shopping centers dominated by regional and national chain stores, the local units of large business. Downtown commercial districts, comprised of a large concentration of small, localized businesses highly vulnerable to changes in economic circumstances deteriorated as a result.

Some progress is being made in revitalizing selected parts of downtown areas despite citywide economic decline as public and private groups join together to plan and finance such projects.

Case Study Findings

Techniques Used to Revitalize Areas

Similar techniques were used in the revitalization projects including:

(1) public investments to improve the physical image of the shopping district through expanded pedestrian space, greenery plantings, benches, fountains, and similar accommodations;

(2) improved transit services;

(3) centralized management for promotional activities of the areas; and

(4) regulations and assistance for building improvements.

Similar and Contrasting Elements in the Projects

From the 1950s to the early 1970s all of the downtown sites had significant declines in businesses, and remaining businesses adjusted by selling lower quality merchandise and by refraining from store improvements in order to survive.

Physical improvements to business space to make the area more attractive to businesses and to shoppers are a major element of the revitalization projects.

The projects to revitalize the downtown retail districts were more frequently initiated by the city government.

Local attitudes toward the entrance of chain stores downtown varied tremendously. In the areas having run-down or low quality stores, chain stores were welcomed for the improved image and level of marketing they bring. In other areas unique independent specialty stores were sought. In some areas the issue of chain stores versus independent merchants has not been considered in planning the projects.

Public-private partnerships in project planning and funding were especially beneficial to many of the more successful revitalization projects. Four of the seven cities set up a special tax district to raise funds from the area merchant property owners.

Analysis of Dun and Bradstreet Data

Business Ownership

In the more successful downtown revitalization districts in the Central Business Districts of the cities studied, the proportion of chain stores has been rising relative to the independent businesses, but dropping in the less successful revitalization districts.

Types of Businesses

All of the downtown revitalization zones are dominated by general merchandise stores, apparel stores, and stores selling lower-priced nondurable goods.

Shifts in types of businesses in the revitalization district varied from city to city. Generally, it is believed increases in apparel stores and restaurants follow increases in pedestrian levels in the successful projects.

Business Growth

Small independent stores showed increases in employment while the large independent stores consistently tended to show declines in employment in both the revitalization areas and the rest of the Central Business District.

There was no evidence to support that a higher rate of growth occurred in existing businesses in the revitalization zones after initiation of the revitalization projects, nor that they grew more than businesses elsewhere in the Central Business District. However, revitalization projects had a significant impact on increasing the rates of new store entry into the area.

If the Central Business District was relatively important as a source of metropolitan-wide sales, growth of existing businesses was positively affected, but this factor had no significant effect on entry and exit rates.

Rates of growth and survival were not significantly different between chain stores and independents, but the new entrants to these areas were more often chain stores.

Public Programs and Policies Affecting Downtown Revitalization

Management Organizations

A central management organization was an important aspect of many of the projects. These organizations provided coordination of centralized promotion and management activities, with the more sophisticated ones engaged in compiling data for market planning, cooperating with the public and private sectors regarding land use and transportation planning, monitoring local and state legislation, and monitoring property values in the area.

Funding Sources

Among the Federal programs available to fund downtown revitalization projects were those of the Department of Housing and Urban Development (HUD), the Department of Transportation (DOT), and the Economic Development Administration (EDA).

A survey of projects funded under HUD's Urban Development Action Grants Program showed that

the private sector provided approximately six times the amount of Federal funds. A full 95 percent of the private funds in these projects were not otherwise subsidized.

Many of the downtown revitalization transportation projects were assisted with DOT funds, and EDA was an important source of loans and grants to local governments.

At the local level special tax levies for designated areas have become a popular means of local funding as they provide a flexible way of handling one-time funding needs.

Tax-exempt Industrial Revenue Bonds and Indı Development Bonds were used in some of th projects.

Small Business Needs

There is concern that small businesses are thre ened by policies which discriminate against th existing store owners in the drive to attract new nesses in the area.

Ongoing promotional activities through ce associations are important to the success of th revitalization effort.

Rent guarantees, tax breaks, and shopping cen placement services for independent retailers c help equalize the advantages of chain stores.

Policies are needed to minimize unfair competit from street vendors in the revitalized areas.

The complete report is available from NTIS. Accession #PB82 184888; Cost: $19.50; Microfiche cost: $4.50.

Government Procurement

Public Law 94-305

Sec. 202.

The primary functions of the Office of Advocacy shall be to—

(2) assess the effectiveness of existing Federal subsidy and assistance programs for small business and the desirability of reducing the emphasis on such existing programs and increasing the emphasis on general assistance programs designed to benefit all small businesses . . .

Small Business in the Emerging Energy Technologies

Completed in 1982 by
Resource Management Consultants, Inc., Boulder, Colorado

Michael D. Yokell

Purposes of the Study

The first purpose of the study was to determine the effect of Federal procurement and loan policies on the size distribution of firms in the solar, photovoltaics, and biomass industries. The second purpose was to examine the structure of these industries to discern where future opportunities might lie for small business.

Background

Since the oil embargo of the Organization of Arab Petroleum Exporting Companies (OAPEC) in 1973, emphasis has been on research and development of alternative sources of energy. A number of emerging energy technologies appear to hold promise for the future. This study focuses on three: (1) solar heating and cooling, (2) photovoltaics, and (3) biomass feedstocks.

The study assesses the Department of Energy's (DOE's) Federal procurement activity to see how it has affected the relative opportunities for small and large firms in these industries. A similar review is presented of the Small Business Administration's (SBA's) energy loan program.

In addition, the study provides three models as the analytical framework for examining the structure of these industries to identify areas of opportunity for small business within each.

Other issues related to the problem that may be of interest to SBA are given also.

Scope and Methodology

DOE R&D Procurement

Data from the Federal Procurement Data Center of the Office of Management and Budget were reviewed to determine the relative status of large and small business in participating in DOE's funded R&D Research. The data series shows only prime contracts in excess of $10,000 for solar R&D, energy conservation R&D and hydro R&D over a three-year period, 1978–80. The data are partial for 1978, the year the system was implemented, and for 1980. A contract may be classified under one product or

service code only. Solar R&D projects that are part of a large multi-purpose contract going to a large firm would not show up in the data series. This means that the role of small business in this data set will be overstated.

SBA's Energy Loan Program

A survey was made of SBA's District Offices to obtain information on firms in the solar energy industries that received small business energy loans in 1979, the year SBA's energy loan program was established. The purposes were to obtain financial data on a cross-section of solar energy industries and to profile the financial health of firms by SBA Regions. Responses were received for 104 of the 136 firms on which information was requested. The sample is potentially biased by the provisions of the Small Business Energy Loan Act and by the implementation of it. The law mandates that no more than 30 percent of a loan can go to finance research and development. Since research is the primary product of photovoltaic firms, they are precluded from participating in the lending program. Only one such firm is in the survey. The data are limited by inconsistencies in the information recorded at each SBA District Office.

Framework for Industry Structure Analysis

To provide an analytical framework for determining the ways in which young, innovation-based industries grow and mature, three models were used:

(1) The Mueller-Tilton development model characterized the evolution of an innovation-based industry as a four step process: (a) innovation stage, (b) imitation by large firms, (c) technological competition, and (d) industry maturity.

(2) The Abernathy-Utterback product development model sees product development as a three-step process: (a) product development, (b) process development, and (c) maturity.

(3) The market-entry strategies derived by Booz, Allen, and Hamilton, Inc. in 1978 include: (a) first to market, (b) follow the leader, (c) application engineering, and (d) last to market, or "me too."

Main Industries Studied

The main industries studied to determine how closely

their patterns of development fit those of the models were solar heating and cooling (SHAC), photovoltaics and biomass liquids production. By relating industries to the models, the factors which determine the large firm/small firm mix were identified.

Opportunities for Small Business

The study presents an overview of the opportunities for small businesses in solar heating and cooling, photovoltaics and the production of methanol or ethanol from biomass.

Other Issues

Other issues, particularly the availability of capital, relative to the growth and structure of emerging energy technology industries are discussed.

Highlights

Shortcomings of the data make any firm conclusions difficult. The usefulness of the data is limited by the inclusion of only direct contracts (omitting subcontracts), of only one classification of product or service in multi-purpose contracts (thereby omitting money spent on R&D that is part of large contracts to large contractors), and of the partial coverage for the years 1978 and 1980. The data set does show the direct awards for R&D that are predominantly related to solar or conservation technologies.

Although small business received the largest number of awards, it received a much smaller share of total contract dollars awarded.

The average size of the small business DOE proc ment was $16.3 thousand compared to $35.6 thou sand for large business. Still the proportion of mon awarded to small business is significant.

Small businesses had very limited success in winning awards that were advertised in the **Commerce Business Daily.** Out of 43 awards, only eight went to small business. Possible causes of this are the high cost involved and the company structure needed to respond to formally advertised requests.

Another interesting aspect of the data is the dominance of noncompetitive awards. Of the total awards, 64 percent were sole source, 29 percent were formally advertised, and 7 percent were limited to firms invited to submit bids.

Small businesses were very successful in receiving noncompetitive (sole source) contracts relative to large business, due in part to the DOE unsolicited proposal program.

SBA's Energy Loan Program

Financial Health of Small Businesses in Emerging Energy Technologies

The survey showed that short-term profitability is mixed but sales are growing rapidly.

Typically, new businesses require several years of operation before they become profitable. Some firms endure short-term losses to build a large market or market share in the long run. The survey showed that average firm profitability rose from a loss of $16,000 in 1979 to a loss of $10,000 in 1980. Thirty-nine percent of the firms surveyed were profitable in 1979 and 50 percent in 1980. Also, there were significant profitability differences between business sectors.

While profits have been marginally negative, sales have been growing rapidly from an average of $362,000 in 1979 to an average of $598,000 in 1980.

Firms receiving SBA energy loans directly contribute thousands of jobs to the economy.

Employment in the firms participating in the energy loan program averaged 18 jobs in 1979 and 14 jobs in 1980. The decline was probably due to changes in the sample population rather than loss of jobs, since the 25 firms reporting employment for both 1979 and 1980 showed an average increase in employees of 8 per firm. An extrapolation of the data for the 136 firms participating in the energy loan program showed an expected average employment of 16 persons and an expected number of jobs generated of over 2,000.

The liquidation rate, although not high (9 percent), indicates the willingness of SBA loan officers to make somewhat riskier loans for the emerging energy technologies, but also shows they did not pursue an aggressive lending policy at the expense of financial integrity.

Industry Structure Analysis

Development Models Applied to Emerging Energy Technologies

Emerging energy industries cannot be grouped into one developmental model. They differ in their fundamental characteristics.

The **solar heating and cooling industry** manufactures a series of products that are at different stages of product development. The technologies used for heating products place industries producing them in the "process development" stage of the Abernathy-Utterback industrial development model and in the "innovation" stage of the Mueller-Tilton model. The small/large manufacturer mix that will eventually develop depends on whether or not the products developed are suitable for economies of scale and for product standardization.

The **photovoltaics industry** is best characterized by the Mueller-Tilton model, although it does not fit the model perfectly. Parts of the industry are moving from the "innovation" stage to the "imitation" stage.

Products of the **biomass liquids production industry** are in the "process" development stage of the Abernathy-Utterback model. These industries are unlikely to offer opportunities to small business because of the high capital investment needed. The only significant long-term small business opportunities appear to be in the production of feedstock.

Opportunities for Small Business in the Emerging Solar Energy Technologies

Solar Heating and Cooling (SHAC)

Currently, the largest component of the SHAC industry is the low temperature swimming pool heaters. In the short-term, water heating and space heating will dominate this industry which is now in the "production process" phase. The character of SHAC technologies has created an industry dominated by smaller firms both as manufacturers and distributors. The outlook is that the greatest concentration of small firms in this industry will be in the distributorship and installation areas. It is believed that over the next decade many small manufacturers in this industry will fail and that the remaining ones

will become medium-sized, with a few large firms having solar divisions or subsidiaries in the industry.

Photovoltaic Industry

Fewer opportunities for small business are available in the photovoltaics industry than in the SHAC industry. The manufacture of photovoltaics is subject to economies of scale, which will tend to eliminate small businesses. This industry is really two distinct industries—manufacturing and R&D. The long-term future of small business in this industry appears to be limited.

Biomass Industry

The study shows that ethanol and methanol production from biomass is technically and economically feasible for firms having fewer than 500 employees. Virtually all the methanol and ethanol production processes provide substantial opportunities for small business. The opportunities are less in feedstock production because of the huge capital requirements for land. Farmer-owned cooperatives offer the single largest opportunity for small business in biomass feedstock production.

Other Issues

Availability of Capital

Capital investment requirements of emerging energy technologies are likely to be substantial for the rest of the century. One study for DOE estimated between $99 billion and $524 billion in 1980 dollars will be needed between 1978 and 2000. This problem is exacerbated by rapid demand for growth in these industries during a period of high interest rates, the high risks caused by uncertain demand forecasts, and institutional barriers to investing.

The limited potential for medium-term profits in the solar heating and cooling industries has reduced venture capital investment. The photovoltaics industry, on the other hand, offers a potential for profits and has attracted large, capital-rich corporations as investors.

The small firm/large firm mix in emerging energy technologies will be affected by the nature of the capi-

tal markets. Today's expensive capital markets shift the firm size mix toward larger firms.

The complete report is available from NTIS. Accession #PB83 117333; Cost: $16.00; Microfiche cost: $4.50.

Factors Affecting Small Business Participation in Government Procurement

Completed in 1982 by
Cooper and Company, Stamford, Connecticut

Gershon Cooper

Purposes of the Study

The purposes of the study were to identify the factors affecting small business participation in Government procurement and to identify the more promising governmental actions that would increase procurement to small business.

Scope and Methodology

The contractor selected three Federal agencies for the study, and with the SBA's assistance a contact person was identified in each. The agencies are not identified in the study, as confidentiality was a condition of their willingness to participate.

A case study approach was used. Each "case" represented a procurement, which included the request for a procurement from an operating manager; the processing of that request by a procurement office; responses from offerors; nonresponses from potential bidders; and the award to a particular offeror. Data for each case were obtained from procurement files.

Unstructured personal interviews were conducted with requisitioning and procurement personnel after examining files.

A separate mailing list was compiled for each case from the procurement file information, supplemented with names from agency mailing lists. A survey questionnaire was sent to these organizations. Part I of the questionnaire differed from case to case and was designed to obtain information about a specific procurement. Part II was the same for all, with questions about Government procurement in general.

A total of 35 cases were developed with 280 organizations returning useable questionnaires.

Findings

The findings are summarized under headings corresponding to the source of the information.

File Data

The number of offers varied greatly depending on the items to be purchased.

The files provide no evidence that the solicitation devices used are effective.

A bias in favor of purchasing from manufacturers instead of dealers may exist.

Small business set-asides are frequently resisted by procurement and requisitioning personnel.

Advertised procurements frequently become negotiated ones.

A large part of Government procurement in any year is effectively noncompetitive due to multi-year commitments.

Award processes and criteria for competitive procurements requiring technical evaluation are applied in a manner to suggest a preference for a particular offeror based on unacknowledged criteria.

Responses to Questionnaires

Characteristics of respondents:

	Percent
• Types:	
Profit-making corporations	95
Other profit-making	2
Nonprofits	[illegible]
• Receipts:	
Over $100 Mil.	9
$1 Mil. to $100 Mil.	63
Under $1 Mil.	28
• Number of employees:	
Over 500	18
20–500	56
Under 20	26
• Years in business:	
Over 50	21
5–50	64
Under 5	16
• Procurement Experience:	
Bidders	98
Successful bidders	93
Bidders to prime contractors	68

The Small Business Firm as Provider of Fire Department and Emergency Medical Services in American Communities

Completed in 1982 by
Gage-Babcock and Associates, Inc., Elmhurst, Illinois

John A. Campbell

Purpose of the Study

The purpose of the study was to compare existing public and private providers of firefighting and emergency medical services (EMS) to determine if this is an area which small businesses should be encouraged to enter and, if so, to provide guidelines which will increase small business participation.

Background

Traditionally, the elected officials of a community arrange to provide fire protection and public EMS for the entire community. Public fire departments and volunteer fire departments, often supported by the local government, are the two most common suppliers of fire suppression and EMS in this country. In earlier times insurance companies provided firefighting services to property owners insured by them. A similar arrangement prevails today in the form of the subscription-supported fire departments that supply services only to subscribers. Often more efficient than any of the above-mentioned types, but not as widely used, are privately operated fire departments. This study examines the latter as a viable business opportunity for small entrepreneurs.

Scope and Methodology

The level of service provided and costs of the following private suppliers of fire department and EMS were compared to those of similar communities with public service suppliers and to the average for a number of cities:

- Fire suppression to Scottsdale, Arizona
- Fire suppression and EMS to Elk Grove Township Fire Protection District in Illinois
- Paramedic EMS to the city of San Diego
- Paramedic EMS to several suburban Chicago fire departments

The hypothesis based on economic theory that costs will tend to be lower in private firms than in public entities was examined.

The hypothesis that the presence of a private producer will increase the efficiency of nearby public producers was also tested.

In addition, conclusions and guidelines for communities wishing to consider contracting for these services are given.

Highlights

Private Service Providers

Rural/Metro Fire Department of Scottsdale, Arizona

The cost to residents of Scottsdale was less than 1/3 the average fire department cost to residents in U.S. cities in similar sized communities.

The per capita fire department cost for Scottsdale was $13.90 in 1979 dollars. By comparison the average per capita cost for cities in the 50,000–100,000 population range was $37.24.

The Scottsdale per capita fire department cost was lower than that of all other Arizona cities with public fire departments, and the per capita cost for *these* cities was well below the national average.

The average per capita fire loss in Scottsdale in 197 of $8.49 compares favorably to the national average of $13.00, indicating that lower operating costs did not adversely affect fire losses.

The above comparisons support the hypotheses:

(1) Private producers of public services will be more efficient than public producers.

(2) The presence of a private producer will increase the efficiency of nearby public producers.

However, when comparing costs with other cities, it is important to know that the Scottsdale Fire Department did not provide full emergency medical services while some other city fire departments in the study did.

Elk Grove Township Fire Protection District

Elk Grove, Illinois, is a residential, commercial, and industrial area located adjacent to Chicago's O'Hare Field whose population is about 8,000, increasing to 20,000 during the business day. The fire department provides both fire suppression and paramedic emergency medical services.

The cost per on-duty fire fighter for Elk Grove Township is lower compared to that in other cities of similar size. Its cost per full-paid firefighter is also lower.

These comparisons lend further support to the hypothesis that a private profit-making firm will provide services at a lower cost than a public supplier.

Public-Private Joint Ventures

Joint ventures to provide fire department and/or EMS are gaining in importance. A private subscription fire department joined with the Rural Metro of Arizona to provide services to Knoxville, Tennessee. In numerous other cities the services provided by public fire departments are supplemented with EMS provided by private firms. In San Diego paramedic service providers were solicited through a formal request for proposal process, with the winning bid of a private firm lower than the bid of the public fire department.

Barriers to Private Enterprise

A number of barriers to entry into the business of providing fire department services and EMS exist. Among them are:

(1) Reluctance on the part of public officials and public fire departments to accept a private fire department.

(2) Competitive disadvantage in competing with public fire departments for capital.

(3) Extraordinary costs and excessive demands made on resources due to emergencies.

(4) Exclusion from Federal and state training grants.

(5) Compliance with the requirements of the Occupational Safety and Health Administration.

(6) Inequity of public and private vehicle license fees.

(7) Inequity of public and private property tax on equipment.

Conclusions

Private provision of fire suppression and/or EMS by small business firms is a technically and economically viable alternative to government provision of such services in:

(1) Communities changing from a volunteer or paid-on-call fire department to a part- or full-paid fire department;

(2) Communities expanding into advanced emergency medical services;

(3) Government units dissatisfied with services provided by another governmental unit;

(4) Communities wishing to share the services of a consolidated fire department; and

(5) Facilities such as harbor terminals, institutional complexes, airports, military bases, governmental laboratories and similar places.

The study presents guidelines for a government to use in setting up a fire department or EMS system based on those used in San Diego. Solicitations for proposals from private firms may be made using the guidelines.

The complete report is available from NTIS. Accession PB82 160466; Cost: $10.50; Microfiche cost: $4.50.

Acquisitions and Mergers

Public Law 94-305

Sec. 202.

The primary functions of the Office of Advocacy shall be to—

(1) examine the role of small business in the American economy and the contribution which small business can make in improving competition . . .

(9) recommend specific measures for creating an environment in which all businesses will have the opportunity to compete effectively and expand to their full potential . . .

The Effects of "Tight Money" on Small Business Mergers

Completed in 1981 by
University of Virginia, Charlottesville, Virginia

John S. Guerard, Jr.

Purposes of the Study

The purposes of the study were: (1) to determine whether periods of "tight money" create an environment which causes small firms to merge with larger firms to gain access to capital markets; (2) to identify how acquiring firms differ from acquired firms in capital expenditures and employment; (3) to compare the economies of scale in employment and capital expenditures of acquiring firms after merging, to those of nonmerging firms; and (4) to identify the implications these findings have for Government policy.

Scope and Methodology

The sample of acquiring firms consists of 21 firms from the Industrial COMPUSTAT File that made a single acquisition during the period from 1967 to 1974. Data on firms that were acquired and on nonmerging firms were taken from the Industrial Research COMPUSTAT file.

[Note: (1) Acquired firms are usually small businesses with sales of less than $50 million. Acquiring firms tend to be larger. (2) Only single acquisitions are examined and these are not representative of the merger movement which generally involves firms making numerous acquisitions.]

Discriminant analysis was employed to identify the differing financial characteristics of the 21 acquiring and acquired firms from five years prior to the merger until the year before the merger.

The variables used were selected because of their importance to the merger decision.

Debt/Equity. The acquisition of a firm with less debt may allow the acquiring firm to relatively reduce its debt after the merger. Or, if the acquiring firm is satisfied with its debt/equity ratio prior to the merger, it may issue additional debt after merging without changing its debt ratio.

Price/Earnings. If the price/earnings multiple of an acquiring firm exceeds that of an acquired firm,

the acquired earnings are capitalized by investors at the capitalization rate of the acquiring firm. This creates an increase in the earnings per share and in the price of the common stock of the acquiring firm.

Current Ratio. A liquidity constraint, as measured by the current ratio, may be a strong factor in the decision of a small firm to merge with a larger firm.

Operating Return on Assets. Profitability, as measured by the operating return on assets, is an important consideration in mergers.

Cost of Capital. If firms are excluded from capital markets, their cost of capital is usually higher than that of acquiring firms. Mergers may result to allow acquired firms to gain access to capital markets. The Lerner-Carleton cost-of-equity variable developed from a series of accounting identities is used as a proxy for the cost of capital. The analysis focuses on whether or not the cost of capital is a significant variable in differentiating the acquiring and acquired firms.

Cash Flow/Sales. An extreme drop in cash flow/sales may influence weak firms to seek mergers.

A sample of nonmerging firms was paired with acquiring firms to test for the existence of scale economies in capital and labor resources after the merger.

Highlights

The following hypotheses that influence the merger decision were tested:

Hypothesis #1. The cost of capital during "tight money" periods increases more for smaller firms than for larger firms, resulting in the exclusion of small firms from the capital markets and in the facilitation of mergers.

The data show that the cost of equity of acquired firms is considerably below the cost of equity of acquiring firms. Thus, hypothesis #1 is rejected.

Hypothesis #2. Acquiring firms differ from acquired firms with respect to capital expenditures and employment.

Capital expenditures were generally higher for acquired firms, making them targets for the acquiring firms. However, acquiring firms did not acquire firms on the basis of employment.

Hypothesis #3. Following the merger, acquiring firms, compared to a sample of nonmerging firms, have diseconomies of scale in capital and labor resulting from the relatively inefficient use of the resources of the acquired firms.

Following mergers, the acquiring firms enjoyed net scale economies in capital expenditures and employment. The economies of scale in capital expenditures more than offset the diseconomies of scale in employment. Thus, hypothesis #3 is rejected.

Conclusion

For single acquisitions made between 1967 and 1974, smaller firms were not excluded from capital markets and acquiring firms reaped economies of scale in capital and labor from mergers. There is no evidence that mergers produce any inefficiencies in asset management.

The complete report is available from NTIS. Accession #PB81 216780; Cost: $8.00; Microfiche cost: $4.50.

Concentration in Retail Trade and Services

Completed in 1982 by
University of Illinois, Chicago, Illinois

Alvin D. Star

Purposes of the Study

The purposes of the study were to explore the extent of recent concentration in the Retail Trade and Service industry sectors and to determine if such concentration will significantly reduce the opportunities for small business in these industries over the 1980–85 period.

Background

More small businesses are found in the Retail Trade and Services industry sectors than in all other industry sectors combined. These industry groups contain the vast majority of women-and minority-owned businesses. Historically, these sectors of the economy have been relatively unconcentrated and have been relatively easy to enter.

Presently, concern is emerging over the effect of increasing concentration in these industry categories. The underlying cause of industry concentration is economies of scale. Increased concentration in the Retail Trade and Services sectors that affects the ability of small firms to compete will have a significant impact on a very large segment of the small business community, particularly on the more vulnerable minority- and women-owned firms.

Methodology

Data from the *County Business Patterns and Economic Census Enterprise Statistics* were used to test four hypotheses listed here under "Findings." Adjustments were made to make the data of different years comparable as to size categories and business entities.

Projected estimates were made for the years 1980 and 1985. A test of the methodology used for this study was made by comparing actual 1977 estimates with 1977 projections made from earlier-year data using the methodology. The author states that no great confidence can be placed in the reliability of the 1980 and 1985 projections and that these data should be used with caution.

The Gini coefficient, a statistical measure of inequality, was used to measure industry concentration. The study contains a detailed explanation of this statistical measure and its use.

Findings

Results of Testing and Hypotheses

Hypothesis #1. The rate of growth in the Retail Trade and Services industry sectors in the United States will decline significantly in the next five years.

Surprisingly, the data show no support for this hypothesis. Retail Trade and Services businesses experienced employment growth between 1973 and 1977 and are expected to grow about the same rate as the average for all industries through the mid-1980s.

Hypothesis #2. Concentration in the Retail Trade and Services industry sectors has increased over the past 30 years and will increase significantly over the next 5 years.

Concentration differs substantially depending on whether an "absolute" or "relative" definition of small business is used. An "absolute" definition of small business refers to definite size breaks between large and small business. In this study businesses having fewer than 100 employees were considered small Concentration, as measured by employment share for these small businesses compared to businesses having 100 or more employees, was termed an "absolute" measure of concentration.

A "relative" definition of small business refers to all except a few larger firms, which is of little value in analyzing industries at the National level. Instead, to measure inequality this study used the Gini coefficient of concentration, whose sensitivity to changes in the size equality of businesses in an industry yields what also may be termed a "relative" measure of concentration.

"Absolute" concentration has increased in the Retail Trade and Services industry sectors over the past 20 years. "Relative" concentration has increased only slightly. A slow increase in "relative" concentration is expected through 1985.

Hypothesis #3. All other things being equal, specifically Government policy toward small business, opportunities for establishment and operation of small businesses in the Retail Trade and Services industry sectors will decline in the next five years.

The most striking finding concerning the Retail Trade group was the large decline in the number of

firms with 1–4 employees. This class of retailers declined from 661,000 in 1958 to 565,000 in 1977, with a further decline to 526,000 projected to 1985.

Opportunities for other small retail trade and service businesses are not expected to decline in the next five years.

The number of firms has grown and the number of employees has grown, but the average number of employees per firm has also grown, indicating a larger optimal scale of operation.

Hypothesis #4. A change in Federal law and policies toward small business could ameliorate a negative trend, if any, in small business opportunities and operations forecast for the next five years.

Only for Retail Trade firms of from 1–4 employees did the data show a decline in opportunities over the next five years. If the decline is due to Government policies having a disproportionate effect on these firms, then changes in Federal laws and policies would help them. The cause of the decline was not established in this study.

Concentration in Retail Trade Industries

Industries having a significant tendency toward concentration:

- General merchandise stores (large department stores are crowding out smaller stores)

- Miscellaneous retail firms (drug and proprietary stores are a major component)

- Eating and drinking places

- Building materials

Industries showing a moderate or mild tendency toward concentration:

- Food stores
- Auto dealers and service stations
- Retail furniture

Industries showing a stable trend:

- Apparel and accessory stores

Concentration in Services Industries

The steady tendency toward concentration over the study period in the Services industry sector as a whole is expected to continue through 1985. The services industries show rapid growth and great differences among types of firms. As the growth rate varies, the minimum scale of economic operation is changing at different rates for different types of firms.

Industries having a strong tendency towards concentration:

- Motion picture
- Amusement and recreation

Industries having a slight tendency towards concentration:

- Hotels and other lodging
- Business services

Industries having a tendency towards deconcentration:

- Personal services (with declines in number of firms a
- Miscell
in the n

Industries having a stable concentration tendency

- Auto repair services and garages (the least co centrated industry and expected to continue be)

Franchising as a Factor in Concentration

Franchising is probably the only form of business entity that creates new business units. Therefore, a increase in franchising should decrease concentration. However, the record on franchises is very uncle and may well depend more on total prospects of a particular industry. There are increasing opportun ties for franchises, but the data do not suggest increased use of franchising leading to any measu able trend of deconcentration.

Mergers and Acquisitions as Factors in Concentratio

The number of mergers and acquisitions is small compared to the total number of businesses in the

Retail Trade and Services sectors. In addition, much of this activity is among large business. There is little evidence to indicate that mergers and acquisitions, as opposed to internal growth, have had more than a small effect on increasing concentration in the Retail Trade and Services sectors.

Recommendations

The author believes economies of scale are valuable but recommends specific policies to further encourage the growth of small firms in the Retail Trade and Services industry sectors. The recommendations are:

(1) Increase management experience requirements for SBA guaranteed loan recipients, since the rapid growth necessary for survival puts a premium on management.

(2) Increase small business loans to qualified new Retail Trade and Services entrepreneurs in expanding industry segments.

(3) Establish individual proprietor business startup exemptions in the Retail Trade sector.

The complete report is available from NTIS. Accession #PB82 (Pending).

Newspaper Groups: Economies of Scale, Tax Laws, and Merger Incentives

The Rand Corporation, Santa Monica, California

James N. Dertouzos
Kenneth E. Thorpe

Purpose of the Study

The purpose of the study was to examine the ownership structure of the newspaper industry to determine what economic motives cause mergers and how Government policies affect independent newspaper ownership.

Background

The small family-owned newspaper is being replaced as more and more newspaper firms become subsidiaries of large corporate newspaper chains. Of all the newspaper firms in the United States in 1910, only 13, or 3 percent, owned more than a single newspaper. By 1980, 155 newspaper chains owned over 60 percent of the total newspapers in the country.

This tendency toward group ownership may have resulted in a decline of independent newspaper "voices." Today there are fewer than 800 independent daily newspapers in the United States, a 65 per cent decline since 1910. The potential influence of the central management of chains is increasing as small newspaper voices are disappearing from the scene.

What are the reasons for the dramatic changes occurring in the newspaper industry? One theory proposes that they are a consequence of economic factors. Conglomeration may be due to economies of scale from group newspapers producing outputs centrally and distributing them to several establishments. The argument against this is that the wire services, news bureaus, and feature syndicates provide subscribing newspapers with economic advantages of centrally generated news and editorial content.

Pecuniary economies of scale through lower newsprint prices that chains may be able to influence through bulk purchases and lower labor costs gained through collective bargaining leverage was another proposed cause for merging.

Technological diffusion by multi-establishment firms has been proposed as yet another determining factor in mergers. However, technology transfer is not an exclusive activity of chains. The American News-

paper Publishers' Association has been very effective in facilitating the transfer of technology to its members.

Another theory holds Government tax laws predominantly responsible for mergers.

This study assesses each of these possible causal elements in merger activity to determine its role in changing the structure of the newspaper industry.

Scope and Methodology

Economies of Scale

A structural model of the newspaper firm was used to determine if mergers in the newspaper industry resulted from economies of scale. The underlying hypothesis was that the level at which profits are maximized is subject to the same production technology conditions that determine the levels of news and features, advertising linage, and circulation.

Since the required data for estimating the structural model of newspaper operations were only partially available from public sources, a survey questionnaire was mailed to about 1000 daily newspaper firms belonging to the Audit Bureau of Circulations to obtain additional data. Responses of firms publishing single editions only, which amounted to 130 replies, were used in the sample.

By comparing characteristics of firms in the survey to those of the industry as a whole, the sample was judged to be consistent with the expected result if the firms surveyed had been selected randomly.

Pecuniary Economies of Scale

Pecuniary economies of scale were determined by empirically examining newspaper input prices, particularly the cost of newsprint and wages for several categories of labor. Data from the mail survey were used to test the hypothesis that firm characteristics can affect prices.

Data on wage scales for different categories of workers were obtained from the American Newspaper Publishers Association. Regional and city-size wage variations were analyzed, as well as wages offered by chains versus smaller independent newspapers.

Technological Diffusion in the Newspaper Industry

An econometric analysis of two distinct data sets with

disparate statistical models was made to assess the importance of firm characteristics in the speed with which they adopted new technology. Comparisons were made between chain newspapers and their independent counterparts.

Tax Incentives and Newspaper Mergers

The relevance of tax incentives to the growth of newspaper chains was explored, particularly estate tax laws and their effect on the incentive to sell. The tax benefits to the acquiring firm were outlined, and econometric analysis of data on acquisition prices was used to estimate their magnitude. Also analyzed was the potential impact of the Economic Recovery Tax Act of 1981.

Findings

There are few measurable economic differences between newspaper firms owned by groups and those that are independent. Multi-firm economies of scale cannot explain the evolving ownership structure of the daily newspaper industry.

Pecuniary economies of scale were not evident in group affiliated newspaper firms. Variation in the average price of newsprint appeared to reflect accounting differences and inventory fluctuations rather than market prices. Wage c
systematically differ by owner
The evolving structure of the news
not appear to reflect group-relat

The dramatic growth in newspaper chains cannot explained by more efficient adaptation to technological change. Group newspapers have not adopt electronic technology at a faster pace than indepe dents.

By contrast, tax provisions did create powerful inc tives for chains to acquire independent newspa firms and did prevent heirs from retaining the business. Examples include:

(1) Heirs to typical independent newspaper properties have been subjected to a progressive estate ta structure that until 1982 had risen to 70 percent on transfers exceeding $5 million. Recent changes in tax legislation will alleviate this, but if heirs are unable to pay taxes out of current earnings, they will still be forced to sell.

(2) If earnings are retained in the business, thereby avoiding additional income tax, they are subject

to a surcharge of from 27.5 percent to 38.5 percent if it is deemed they are serving no ongoing "reasonable business" need. The requirement that earnings be retained for firms to grow only in related industries creates disincentives for investment.

(3) A purchaser of a business may depreciate the acquired assets even though they may have been fully depreciated before the transaction. Purchasers of companies having losses may carry forward those losses against their own future earnings. Conglomerates are willing to pay more than a smaller purchaser for this benefit.

(4) Under the tax code small business sellers may exchange their business for stock in a large corporation and defer capital gains taxes until the stock is sold—another strong incentive to merge.

Policy Implications

The research has policy implications for all small business. Tax benefits are likely to encourage merger activity not only in the newspaper industry, but in other industries as well. The Economic Recovery Tax Act of 1981 will tend to diminish past incentives to merge, but additional policy changes are needed if merger activity is to be slowed.

The following policy changes are recommended by the researcher:

(1) IRS estate tax valuations should be based on the expected income of the ongoing business instead of on comparable prices of other newspapers sold. In the event the business is sold later, a reevaluation could be made to recapture taxes lost due to the valuation differential.

(2) Accumulated earnings provisions of the tax law should be adjusted. Accumulated earnings for future estate taxes should be allowed, and standards for "reasonable business" needs should be changed.

(3) The rules for depreciation, capital gains rates, and investment tax credits should be reevaluated.

If the provisions in the tax code are meant to stimulate net growth in the economy, they should be

revised to make distinctions between real investments and the purchase of existing assets.

The complete report is available from NTIS. Accession #PB83 126714; Cost: $14.50; Microfiche cost: $4.50.

Taxes

Public Law 94-305

Sec. 202.

The primary functions of the Office of Advocacy shall be to—

(4) determine the impact of the tax structure on small businesses and make legislative and other proposals for altering the tax structure to enable all small businesses to realize their potential for contributing to the improvement of the Nation's economic well-being . . .

The Value Added Tax and Small Business

Completed in 1982 by
Wilmington College, Wilmington, Ohio

Charles F. Palmer

Purpose of the Study

The purpose of the study was to analyze the effects of a value added tax (VAT) on small business in the United States if one were imposed.

Background

As part of a tax restructuring plan, HR 7015, introduced in April 1980, proposed a value added tax. Although the bill was not enacted, it points out the current thinking with regard to the VAT and is the basis for analysis in this study.

The consensus of the supporters of a VAT is that the general price level will not change if: (1) the VAT is an additional tax instead of a replacement tax; (2) the Government spends the tax receipts; and (3) the VAT is not accompanied by an increase in the money supply.

In theory, the VAT is a general tax covering all consumption. In practice, many items are exempted from the tax, which causes a shift of consumption patterns toward untaxed items. Since capital purchases would not be taxed under HR 7015, the bill was meant to stimulate capital investment.

Because of the exemption feature, the tax no lo fits the definition of a general tax that does not impose a differential burden on any person or This lack of generality of the tax may bring economic distortions. This study examines tive effect of a VAT on small and large busi

Scope and Methodology

The study examines the effects of a VAT as o lined in HR 7015 under three different assum

(1) the corporate income tax will remain in effe

(2) the corporate income tax is reduced; and

(3) the value added tax is substituted for the corporate income tax.

Ratio analysis was used to compare small (under $5 million in assets or fewer than 500 employees) and large manufacturing firms.

The following ratios were computed by 4-digit SIC codes and by size of firm:

(1) Corporation tax/business receipts

(2) Value added/business receipts

(3) Value added/number of employees

(4) Dollars of new capital spending/business receipts

Internal Revenue Service data are taken from the **1976 Corporation Source Book** of the Statistics of Income series. Census data are from the **1972 Census of Manufactures and from the 1976 Annual Survey of Manufactures.**

Conclusions and Recommendations

General Effects

A value added tax is not a general tax, since 65 percent of consumption expenditures are not taxed. Thus, there will be differential effects. Some form of small business exclusion is needed.

...ill have no special tax benefits under ... Profitless firms will be required ...hich is based on sales, while they ...een subject to any tax based on ...sinesses are more likely to be profitless.

Administrative costs of a VAT will be disproportionately higher for small business. This could be alleviated by excluding businesses with sales under $500,000 from the tax. Firms with sales higher than this amount probably computerize their purchases and invoices and VAT administrative costs would be small. A tax credit against the VAT would also reduce the impact.

A shift to the purchasing of nontaxed items as the tax increases prices will reduce profits of those businesses selling taxed items.

If the Corporate Income Tax Remains in Effect and A Value Added Tax Is Imposed

—The inflationary tendencies in the economy are lessened if the VAT significantly reduces Government borrowing.

—Interest rates will fall as the Government competes less vigorously for funds.

—Returns to capital will fall because of the additional tax expense. New capital investment will go to nontaxed entities whose returns are higher.

If the Corporate Income Tax Is Partially Replaced by a Value Added Tax

—If the total tax collected remained the same and profitless firms paid the VAT, profitable firms would benefit by paying less in taxes.

If the Corporate Income Tax Is Replaced by a Value Added Tax

—Large business would continue to pay more taxes than small business, since their value added per dollar of sales is higher.

—A consumption type VAT would not provide as much incentive for investment as the current system, which allows accelerated depreciation and an investment tax credit.

—The tax shield of deductions is removed. The VAT tax base may not be reduced through deductions before computing the tax.

—Loss of deductions for fringe benefits will allow small firms to compete on a more equal basis witl large firms for experienced labor.

—Incentives to merge are removed since losses acquired firms are no longer a tax advantag Growth patterns of firms will be minimized, an that might have been rescued will fail.

—The stimulus to business formation throug chapter S firms will be removed.

—Cash flow is adversely affected by a VAT, si must be paid on purchases but is not collected u merchandise is sold. The impact is likely to be g for small business.

The complete report is available from NTIS. Accession #PB83 144485; Cost: $17.50; Microfiche cost: $4.50.

Exporting

Public Law 94-305

Sec. 202.

The primary functions of the Office of Advocacy shall be to—

(1) examine the role of small business in the American economy and the contribution which small business can make in . . .

promoting exports . . .

A Study of the Feasibility of Using Export Associations to Promote Increased Exports by Small Businesses

Completed in 1982 by
Economic Consulting Services, Inc., Washington, D.C.

Clark Chandler

Purpose of the Study

The purpose of the study was to determine whether small business export associations (SBEAs) are likely to provide an appropriate vehicle for assisting small businesses to export.

Background

Firms can either export directly or through export intermediaries. Export management companies (EMCs) have been important in aiding small firms to enter the export market. However, with nearly one-half of the EMCs located within 200 miles of an East Coast port, small inland firms have limited accessibility to their services. Other serious defects in EMCs are their limited product expertise and inadequate overseas representation for their clients.

Passage of the Webb-Pomerene Act in 1918 allowed firms to form export associations which were exemp from the Sherman Antitrust Act. However, this approach to exporting has not been very successful in increasing total U.S. exports or exports by small business.

In the 1960s Joint Export Associations were promoted as export vehicles. This effort was short-li due in part to its emphasis on providing select groups with export assistance which would enab them to export on their own, rather than encourag ing them to form long lasting export associations.

At the time of this study legislation was pending to allow the formation of SBEAs.

Scope and Methodology

A literature search identified the export needs of sma firms, their willingness to participate in export associations, and the possible functions, organizational structures, financial requirements, and mem ber relationships of an SBEA. Based on this informa tion, a theoretical model of a small business export association was developed.

The statistical literature showed three industries having firms that could benefit from participation in

an SBEA: (1) the jewelry industry, (2) the machine tool industry, and (3) the dolls, toys, and games industry. A survey of a large number of firms in these industries gave insight into the types of firms most willing to join an export association and provide a vehicle to test the theoretical model. Based on these findings, a refined structural model was designed to replace the theoretical model.

Public policy implications of SBEAs and the role of the U.S. Government in promoting them are important aspects of the study.

Highlights

Small and medium-sized firms are less likely to take advantage of their export potential than are large firms. Of 18,000 potential exporters in 1972 that did not export, 99 percent were small or medium sized.

The single most important factor causing a firm to export is an unsolicited order.

Firm growth expectations and profit increases were the most important objectives for selling abroad.

External impediments to exporting include: products [illegible] oreign markets, the belief that com- [illegible] reat, and high transportation and [illegible] s. Of these, foreign competition [illegible] he greatest concern to inexperienced [illegible]

Internal impediments include the lack of: information, financial resources, managerial resources, and commitment on the part of management. Such resource-based impediments are significantly more important to small firms and to inexperienced exporters.

The study found that SBEAs may be a feasible method of increasing exports by small businesses. Costs may be reduced by small businesses pooling their resources to export through an SBEA.

An SBEA that performs all export services is likely to appeal primarily to small firms and to inexperienced exporters. An SBEA or Small Trading Company that provides its members with specialized services has more appeal to large firms and experienced exporters.

A fundamental difference between an SBEA and other export intermediaries is that the export association will have ownership links with the firms whose products it represents, which will enable SBEA

to have direct access to the expertise of members, and the members to have more direct control over operations of the SBEA.

Interest in participating in an SBEA was expressed by a large number of the firms surveyed. The types of services wanted from an SBEA by each of the industry groups differed, however.

SBEAs that performed only market research or that assumed all export responsibilities were the least in demand.

An SBEA that would arrange long-term financing, joint-bidding on major foreign projects, or after-sales servicing of exports was of interest to the machine tool industry.

The jewelry industry was interested in an SBEA that provided overseas sales showrooms or combined the products of several firms to offer a complete line to foreign customers.

These two types of SBEAs were of less interest to respondents in the dolls, toys, and games industry.

Several possible functions of an SBEA (conducting market research, developing contracts in foreign markets, after-sales servicing, arranging for joint-bidding, arranging for financing of exports, maintaining facilities abroad, and providing a joint-expc department) are presented and discussed.

Available types of corporate structure are als discussed: a "profit-maximizing" joint-venture, a "sales-maximizing" joint-venture, or a cooperati

Conclusions and Recommendations

"Are export associations a feasible way to prom increased exports by small businesses?" The ar to this question is "yes."

Export associations are likely to be formed by firr producing related products or by firms in the same industry. Small business export problems can be deal with effectively by export associations.

The types of export associations may be "full-service" or "special service." The former is likely to appeal to very small firms and inexperienced exporters, while the latter is more likely to appeal to firms in a wider range of sizes and export activity.

The members of Webb-Pomerene associations are

large firms concerned with price-maintenance and market-sharing. In contrast, SBEAs are not likely to have the market power to maintain artificially high prices or to have the necessary resources to export independently.

The SBA can aid firms wishing to form an SBEA by providing needed information during the formative stages. The formation of an SBEA requires financial and market planning, and the establishment of a clear, contractual arrangement among the members. Assistance might be in the form of seminars or a "one-stop" location for obtaining the information.

SBA should also be concerned with the legal issues associated with forming an SBEA. SBA should support legislation to precertify that the activities of export associations will not violate antitrust laws.[1]

In addition, the SBA may wish to become involved in setting guidelines for certification that take into account the size and market power of the member firms of an SBEA.

[1]EDITOR's NOTE: The Export Trading Company Act of 1982 was passed by Congress and signed into law on October 8, 1982.

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Index of Contractors

Battelle Columbus Division, 505 King Avenue, Columbus, OH 43201

Booz, Allen & Hamilton, Inc., 4330 East West Highway, Bethesda, MD 20014

Cambridge Systematics, Inc., 238 Main Street, Cambridge, MA 02142

Capitol Research, Inc., 4323 Hawthorne Street, N.W., Washington, DC 20016

Cooper & Company, 112 Hoyt Street, Stamford, CT 06905

Economic Consulting Services, Inc., 1320 19th Street, N.W., Suite 600, Washington, DC 20036

Economics Research Group, Inc., Department of Economics, Ohio State University, 1775 S. College Road, Columbus, OH 43210

Gage-Babcock and Associates, Inc., 135 Addison Avenue, Elmhurst, IL 60126

Gellman Research Associates, Inc., 100 West Avenue, Jenkintown, PA 19046

Hudson Institute, Quaker Ridge Road, Croton-on-Hudson, NY 10520

Illinois, University of, at Chicago Circle, College of Business Administration, Box 4348, Chicago, IL 60680

Massachusetts, University of, Department of Economics, Amherst, MA 01002

Popkin, Joel and Company, Suite 1000, 1100 17th Street, N.W., Washington, DC 20036

Rand Corporation, The, 1700 Main Street, Santa Monica, CA 90406

Research and Planning Institute, Inc., 137 Main Street, Cambridge, MA 02142

Resource Management Consultants, Inc., P.O. Drawer O, Boulder, CO 80306

Securities and Exchange Commission, Directorate of Economic Policy Researcl Washington, DC 20549

Texas A&M University, Department of Economics, College Station, TX 77843

Venture Assistance, Inc., 10013 Shadowcrest, Waco, TX 76710

Venture Economics, Inc., P.O. Box 348, 2 Laurel Avenue, Wellesley Hill, MA 02181

Virginia, University of, McIntire School of Commerce, Monroe Hall, Charlottesville, VA 22903

Wilmington College, Department of Economics, Wilmington, OH 45177

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